

**UNIVERSITY OF PORT HARCOURT**

**QUEST FOR SURGERY WITHOUT PAIN:  
INSIGHTS OF AN ANAESTHETIST**

**An Inaugural Lecture**

**By**

**PROFESSOR LONGINUS NDUBUISI EBIRIM**

*MB,BS (Ibadan), PgDA (Ibadan), PgDA (WACS), FWACS, FICS  
Department of Anaesthesiology, Faculty of Clinical Sciences  
College of Health Sciences*

**INAUGURAL LECTURE SERIES**

**NO. 202**

**18<sup>th</sup> SEPTEMBER, 2025**

University of Port Harcourt Printing Press Ltd.  
University of Port Harcourt,  
Port Harcourt,  
Nigeria.  
E-mail: uniport.press@uniport.edu.ng

© **Professor Longinus Ndubuisi Ebirim**

**ISSN: 1119-9849**  
**INAUGURAL LECTURE SERIES NO. 202**  
**DELIVERED: 18TH SEPTEMBER, 2025**

All Rights Reserved

---

**Designed, Printed and Bound By UPPL**

## **ORDER OF PROCEEDINGS**

2.45 pm.        Guests are seated

3.00pm.        Academic Procession begins

The Procession shall enter the CBN Centre of Excellence auditorium, University Park, and the Congregation shall stand as the Procession enters the hall in the following order:

Academic Officer

Professors

Deans of Faculties/School

Dean, School of Graduate Studies

Provost, College of Health Sciences

Lecturer

University Librarian

Registrar

Deputy Vice Chancellor Research and Development

Deputy Vice Chancellor Academic

Deputy Vice Chancellor Administration

Vice Chancellor

After the Vice Chancellor has ascended the dais, the Congregation shall remain standing for the University of Port Harcourt Anthem.

The Congregation shall thereafter resume their seats.

**THE VICE CHANCELLOR'S OPENING REMARKS.**

The Registrar shall rise, cap, invite the Vice Chancellor to make his opening remarks and introduce the Lecturer.

The Lecturer shall remain standing during the Introduction.

## **THE INAUGURAL LECTURE**

The Lecturer shall step on the rostrum, cap and deliver his Inaugural Lecture. After the lecture, he shall step towards the Vice Chancellor, cap and deliver a copy of the Inaugural Lecture to the Vice Chancellor and resume his seat. The Vice Chancellor shall present the document to the Registrar.

## **CLOSING**

The Registrar shall rise, cap and invite the Vice Chancellor to make his Closing Remarks.

The Vice Chancellor's Closing Remarks.

The Vice Chancellor shall then rise, cap and make his Closing Remarks. The Congregation shall rise for the University of Port Harcourt Anthem and remain standing as the Academic [Honour] Procession retreats in the following order:

Vice Chancellor  
Deputy Vice Chancellor Administration  
Deputy Vice Chancellor Academic  
Deputy Vice Chancellor Research and Development  
Registrar  
University Librarian  
Lecturer  
Provost, College of Health Sciences  
Dean, School of Graduate Studies  
Deans of Faculties/School  
Professors  
Academic Officer

## **PROTOCOL**

- Pro-Chancellor and Members of the Governing Council, University of Port Harcourt,
- The Vice Chancellor
- Past Vice Chancellors
- Deputy Vice Chancellors (Administration, Academic and Research & Development)
- Past Deputy Vice Chancellors
- Visiting Vice Chancellors
- Members of the Governing Council
- Registrar and Other Principal Officers of the University
- Chief Medical Director, University of Port Harcourt Teaching Hospital
- Past Chief Medical Directors, University of Port Harcourt Teaching Hospital
- Provost, College of Health Sciences
- Dean, School of Graduate Studies
- Deans of Faculties
- Directors of Institutes and Centres
- Acting Head, Department of Anaesthesiology
- Heads of Departments
- Distinguished Professors
- Visiting Academics and Colleagues
- Esteemed Academic/Administrative Staff
- My Lords Spiritual and Temporal
- Captains of Industries
- Distinguished Guests, Colleagues and Students
- Members of the Press
- Distinguished Ladies and Gentlemen

## **DEDICATION**

This lecture is dedicated to God Almighty who made this day possible.

To my late parents, Nze Joseph Ebirim and Ezechinyerenwa Janet Ebirim, whom God used to bring me to existence.

And finally, to all who suffered the pain of surgery before relief came.

## LIST OF FIGURES

<b>Figure 1.</b> At the cadaver room, University of West Bengal, Calcutta -----	1
<b>Figure 2.</b> Ascending tracts in the spinal cord -----	5
<b>Figure 3.</b> Inhibition of pain impulse transmission at the spinal cord level -----	6
<b>Figure 4.</b> Demonstration of Ether anaesthesia -----	8
<b>Figure 5.</b> Physical restraint to enable surgical operation to be performed -----	9
<b>Figure 6.</b> Epidural analgesia in labour -----	6
<b>Figure 7.</b> Caudal Anaesthesia -----	16
<b>Figure 8.</b> Neurofibromatosis of left thigh excised under epidural anaesthesia in UPTH -----	18
<b>Figure 9.</b> “Beta soup,na money killam” -----	29

## **ABBREVIATIONS**

MB,BS	Bachelor of Medicine, Bachelor of Surgery
UCH	University College Hospital, Ibadan
UI	University of Ibadan
Uniport	University of Port Harcourt
UPTH	University of Port Harcourt Teaching Hospital

## TABLE OF CONTENTS

Order of Proceedings -----	iii
The Inaugural Lecture -----	iv
Protocols-----	v
Dedication -----	vi
List of figures-----	vii
Abbreviations -----	viii
Preambles -----	xi
<b>1.0. INTRODUCTION -----</b>	<b>1</b>
1.1 The Journey from Agony to Pain Relief -----	1
1.2 Who is an Anaesthetist -----	2
1.3 What then is anaesthesia -----	2
1.4. What is the role of the anaesthetist during a surgical Operation -----	2
<b>2.0 PAIN -----</b>	<b>3</b>
2.1. What is Pain -----	3
2.2. How is pain perceived during surgery -----	4
2.3. Timing of perioperative pain. -----	7
2.4. Has surgical pain ever been a problem -----	7
2.5. Is surgical pain still a problem now -----	9
2.6. What is the quest for surgery without pain -----	10
2.7. Was the quest necessary -----	10
<b>3.0 MY CONTRIBUTION TO KNOWLEDGE IN THE QUEST -----</b>	<b>11</b>
3.1. Medicines which prolong postoperative analgesia ---	12
3.2. Use of regional anaesthetic and analgesic techniques	13
<b>4.0 CHALLENGES TO PAIN FREE SURGERY ----</b>	<b>19</b>

4.1	Adverse effects and complications of medicines used for pain relief -----	19
4.1.1	Vasopressors and regional anaesthetic techniques -----	19
4.1.2	Undesirable lower limb weakness -----	20
4.2.	Difficulty in attracting early career doctors into Anaesthesia and pain management specialties -	21
4.3.	Paucity of research on relief of perioperative pain	22
4.4.	Inadequate assessment and documentation of pain severity -----	23
4.5.	Lack of surgical patient involvement in decision making for their pain relief -----	23
4.6.	Inadequate financial support to adopt necessary pain relief methods -----	24
<b>5.0.</b>	<b>FUTURE RESEARCH FOCUS -----</b>	<b>25</b>
5.1.	Collaborative studies with other perioperative pain management disciplines -----	25
5.2.	Studies to improve safety of regional anaesthetic techniques such as epidural and subarachnoid blocks -----	26
<b>6.0</b>	<b>RECOMMENDATIONS -----</b>	<b>26</b>
<b>7.0.</b>	<b>CONCLUSION -----</b>	<b>29</b>
	<b>ACKNOWLEDGEMENTS -----</b>	<b>31</b>
	<b>REFERENCES-----</b>	<b>35</b>
	<b>CITATION -----</b>	<b>42</b>

## PREAMBLES

It is with humility and gratitude to the Almighty God that I stand before you today to deliver this Inaugural lecture from the Department of Anaesthesiology, Faculty of Clinical Sciences, College of Health Sciences of this Unique University.

The first Inaugural lecture from the Department of Anaesthesiology, titled “The Anaesthetist: Working behind the scene, ever-present, ever-watchful”, was delivered in 2014 by Professor Christie N Mato. The second, titled “Pain of Childbirth: The Curse, The Relief and The Anaesthesiologist” in 2018 was delivered by Professor SotonyeFyneface-Ogan. This will therefore be the third Inaugural lecture to be delivered from the Department of Anaesthesiology. And it is titled, **Quest for surgery without pain: Insights of an Anaesthetist.**

I must confess that I did not aspire to become an Anaesthetist. Anaesthesia at that time was not one of the popular medical specialities. The importance of the specialty in the care of surgical patients was not well known and appreciated then (Akinyemi & Soyawo 1980; Eguma, et al. 2005). I also did not see for myself, a role in the *quest for surgery without pain*. But the hands of our Great God led me into it. In June 1981, I graduated from the College of Medicine of Nigeria’s premier university, the University of Ibadan. When in 1991, I decided to train to become a specialist I was advised by Dr. Ndu Eke of Surgery Department of the University of Port Harcourt, who later became the Department’s first Professor of Urology, to

choose Anaesthesia. I took his advice, and I was warmly welcomed by the Head of Anaesthesia Department, University of Port Harcourt Teaching Hospital (UPTH), Dr. Sylvester Ogorika Deinsah. He prevailed on the UPTH Management to sponsor my training as a Supernumerary Resident in the Anaesthesia Department, University College Hospital (UCH), Ibadan. This happened from October 1992 to April 1994 and January 1997 to October 1998. The desire to focus on pain relief during and after surgery was kindled at this time. When I had the opportunity to undergo training at Calcutta, India in August 2009, I went to the DaradiaPain Clinic. This Clinic was affiliated to the Cadaver room of the University of West Bengal (Figure 1), where we learnt the anatomy of pain perception in the human body

Continued collaboration with this Pain Clinic over many years after 2009, fanned the flame of my interest in the relief of perioperative pain. When I was employed as a Lecturer in the University of Port Harcourt in July 2000, I taught pain management and local/regional anaesthesia to undergraduate students preparing for the Bachelor of Medicine, Bachelor of Surgery (MB, BS) degree for about twelve years. Having mentored a newer generation of medical teachers, I relinquished this role and continued to teach other aspects of Anaesthesia.

## The Inaugural Lecturer



**Figure 1. At Cadaver Room, University of West Bengal, Calcutta, India (August 2009)**

### **1.0 INTRODUCTION**

#### **1.1. The Journey from Agony to Pain Relief**

Surgical procedures performed before the advent of modern anaesthesia were very unpleasant experiences. The options available to permit surgical operations were: to strangle the patient until they suffocate and lose consciousness and then surgery is performed; some patients were beaten on the head with a club until they lost consciousness and allowed the surgery to be performed on them; and others were held down by some muscular men and surgery was performed on them while they were screaming with pain. All these agonising

experiences stopped when modern anaesthesia and anaesthetists became available to relieve the pain of surgery.

## **1.2 Who is an Anaesthetist**

The anaesthetist is the doctor who administers anaesthetic gases and other drugs to patients to render them insensitive to the pain of a surgical operation (Famewo 1993). Medical colleagues and surgical patients see the anaesthetist as the doctor who performs what is called anaesthesia so that surgery can be painlessly carried out.

## **1.3 What then is anaesthesia**

Anaesthesia is a reversible condition induced with drugs which may be injected, inhaled or applied topically to the surface of the body. It is a state of controlled and reversible loss of sensation to a part or the whole body. It is local anaesthesia when only a part of the body is involved or general anaesthesia when the entire body is affected and there is usually, loss of consciousness (Mato 2014). Regional anaesthesia is a form of local anaesthesia affecting a large part or region of the body such as a limb, lower half of the body or the head and neck region. Local and regional anaesthesia are obtained with the administration of drugs called local anaesthetics.

## **1.4. What is the role of the anaesthetist in the care of the surgical patient**

With good anaesthesia, the surgeon can conduct his surgical procedure in a relaxed and conducive atmosphere. To achieve good anaesthesia, a preoperative assessment of the patient is

usually performed by the anaesthetist to ascertain patient's fitness for the surgical procedure and anaesthetic technique to be used. The anaesthetist administers drugs to prevent pain during surgery and keeps watch over the patient while under anaesthesia. He or she uses equipment called monitors to ensure that patient's physiological functions are maintained as near baseline as possible, during surgery and in the period immediately after surgery. The anaesthetist must be aware and capable of intervening effectively should any physiological trespass occur to the patient during this period.

Relief from pain is part of the basic human right to health. (Brennan, et al.2007) These rights are enshrined in the 1948 declaration of human rights as a fundamental right of every human being. Preventing pain in any situation, is therefore, an obligation.

## **2.0 PAIN**

### **2.1 What is pain**

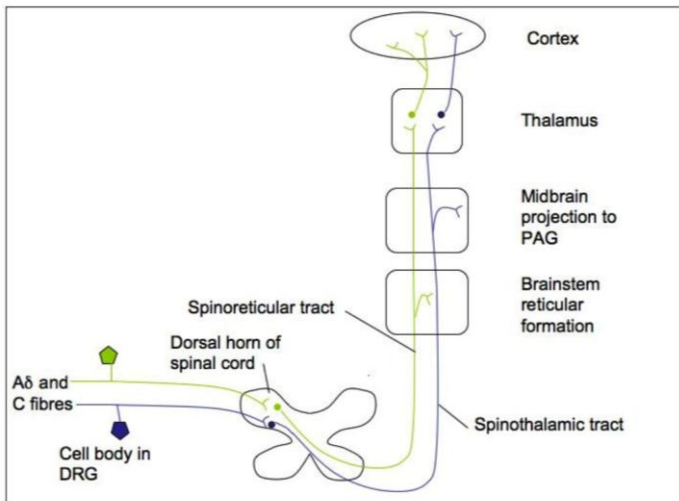
Pain is a term that describes uncomfortable sensation in the body. The International Association for the Study of Pain. (IASP), defined Pain as an unpleasant sensory and emotional experience associated with or resembling that associated with actual or potential tissue damage” (Raja et al 2020).

Pain is both a sensory and an emotional experience. It has a physical as well as an emotional component, both of which need to be prevented or relieved. Pain is described as acute if it is of recent onset or chronic if its duration exceeds three months. Surgery is a branch of medicine which uses manual

and instrumental techniques to treat diseases, injuries and other disorders, in a living body. Surgery can be painful because it involves cutting and manipulating tissues which triggers the body's injury response and can lead to nerve damage and inflammation. Perioperative pain associated with surgery is usually acute. It can become chronic if not effectively relieved.

## **2.2 How is pain perceived during surgery**

Pain signals arise from the site of the surgical procedure. These signals use the spinal cord and specialised nerve fibres to travel to the brain (see figure 2). The nerve fibres which convey pain impulses from site of injury into the spinal cord are called primary afferent fibres. The ones that convey the impulses from the spinal cord to the brain are called secondary efferent fibres. These nerve fibres also work to process the pain signals as described below. Pain is felt when these signals arrive at the brain. The process by which the nerve fibres send signals from the injury or surgical site to the brain is called nociception.



**Figure 2: Ascending tracts in the spinal cord**

There are two main pathways that convey pain signals from the spinal cord to higher centres in the brain: They are the spinothalamic and the spinoreticular tracts.

### **2.2. 1 The spinothalamic tract**

Secondary afferent neurones cross from one side to the other within a few segments of the level of entry into the spinal cord and ascend in the spinothalamic tract in that opposite side to which it crossed, to nuclei within the thalamus. Third order neurones then ascend from the thalamus to terminate in the cerebral cortex. Pain is felt when impulses travelling in these neurones arrive at the cerebral cortex

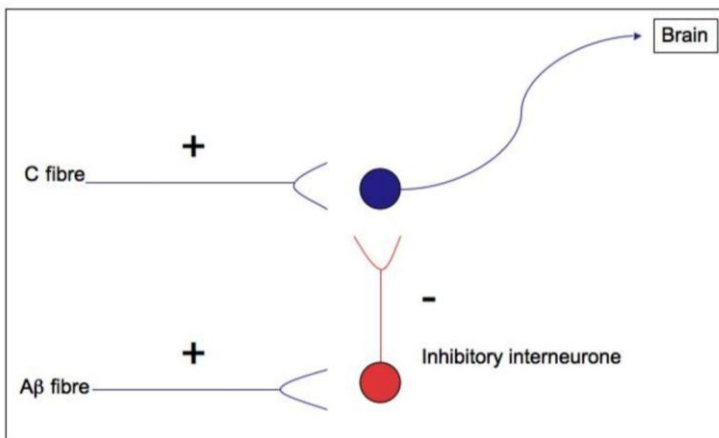
### 2.2.2. The spinothalamic tract

The spinothalamic tract fibres also cross from one side to the other and ascend in that opposite side of the spinal cord to reach the brainstem reticular formation before projecting to the thalamus and hypothalamus. There are many further projections to the cerebral cortex. This pathway is involved in the emotional aspects of pain

### 2.2.3. Inhibition of pain transmission

There are mechanisms that act to inhibit pain transmission at the spinal cord level and via descending inhibition from higher centres (Fig. 3)

### Gate control theory of pain



**Figure 3: Inhibition of pain impulse transmission at the spinal cord level**

The gate control theory of pain was proposed by Melzack and wall in 1965. to describe a process of inhibitory pain modulation at the spinal cord level. By activating A-Beta fibres with tactile, non-noxious stimuli, inhibitory inter-neurons in the dorsal horn are activated, leading to inhibition of pain signals transmitted via C-fibres

### **2.3 Timing of perioperative pain**

Perioperative pain is pain that occurs around the time of a surgical procedure. This period usually lasts from the time the patient goes into the hospital or doctor's office for surgery until the time the patient goes home. It is subdivided into three stages: Preoperative, Operative and Postoperative. The surgical patient may experience pain during any of these three stages.

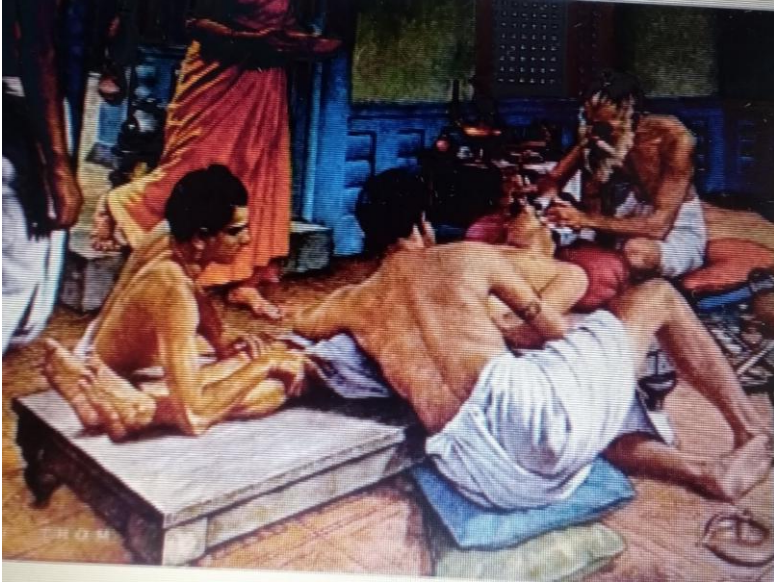
### **2.4. Has surgical pain ever been a problem?**

Anaesthesia is the use of medicines to prevent pain during surgery and other procedures. William Thomas Green Morton (WTG Morton) in 1846, performed the first successful public demonstration of surgery without pain. He made his patient inhale ether (See figure 4), before the surgery was performed. And this marked the advent of modern anaesthesia. (Robinson& Toledo **2012**)



**Figure 4. Demonstration of Ether Analgesia by William Morton.**

A monument was erected in honour of WTG Morton in Boston USA. It reads thus: "Inventor, and revealer of inhalational anaesthesia: Before whom, In All time, Surgery was Agony; By Whom, Pain in Surgery was Averted and Annulled; Since Whom, Science has Control of Pain". Options for relief of surgical pain before WTG Morton included use of extracts of opium, mandrake plants, cannabis, coca leaves and others. Non- pharmacological methods employed included physical restraint, (see figure 5) carotid artery compression,mesmerism and hypnosis (Amanor-Boadu **2015**).



**Figure 5: Physical restraint to enable a surgical operation to be performed**

### **2.5 Is surgical pain still a problem now?**

Whereas modern anaesthesia has made the intraoperative period safer and almost completely pain-free, challenges still exist in achieving a painless postoperative period. A study of pregnant mothers delivered by caesarean section at the University of Ilorin Teaching Hospital, Ilorin Nigeria, showed that inspite of pain-relieving drugs administered, most of the patients (95%), experienced some degree of pain in the immediate postoperative period. (Kolawole & Fawole 2003). The first 24 hours after surgery was particularly painful for the patients, with 79.6% and 54.6% reporting moderate to severe pain in the recovery room and first postoperative day

respectively. The study concluded that pain remains a significant problem following surgical operations in our environment.

## **2.6 What is the quest for surgery without pain?**

This is the continuing effort for medical advancement, especially with use of anaesthesia to eliminate or minimize pain during surgical procedures. This includes developing more effective pain management techniques as well as surgical techniques that minimize tissue injury and the need for analgesia.

## **2.7 Was the quest necessary?**

Surgery without pain relief had unpleasant effects on the patient. Tumours were not excised until they attained enormous sizes all because of fear of the pain to be felt during surgery. People endured infections until they had to choose between surgery and certain death. Countless people must have died rather than feel the pain of the surgeon's cruel blade. Patients awaiting surgery were like criminals awaiting their execution, counting the days, hours and minutes before the dreaded procedure. Surgery was so gruesome before advent of dependable anaesthesia that surgeons felt like they were going for a hanging and would often shed tears after patients' forced torment. Medical students like Charles Darwin abandoned their medical studies after witnessing surgery without anaesthesia. In 1827, he wrote in his diary, "I attended on two occasions, the theatre in the hospital at Edinburgh and saw two very bad operations, one on a child, but I rushed away before they were completed. Nor did I ever attend again". Darwin

promptly resigned from studying medicine because of what he experienced and began his education in mathematics, the classics and theology.

Use of reliable anaesthesia has allowed millions of surgical patients to avoid suffering and death, caused by surgically treatable diseases and injuries. Increasing knowledge of drugs and anaesthetic techniques have permitted medical and surgical innovations, leading to surgical advances like transplantation of organs and correction of once deadly congenital heart diseases

### **3. 0 MY CONTRIBUTION TO KNOWLEDGE IN THE QUEST**

During a study in the preoperative period, about 57.6% of our surgical patients expressed fear that the pain relief provided for the surgical operation might not last till the end of the procedure. About 56.8% of the participants in that study also feared that pain relief in the postoperative period might not be adequate. (Ebirim &Tobin 2011).

Even in technologically advanced countries such as the United States of America, postoperative pain is not adequately managed in greater than 80% of patients, although rates vary depending on such factors as type of surgery performed, and the analgesic and anaesthetic techniques used. (Gan 2017) Uncontrolled postoperative pain may result in significant clinical, psychological and socioeconomic consequences. Inadequate pain management following surgery may also delay recovery, result in unanticipated readmissions, decrease patient

satisfaction and lead to chronic persistent postsurgical pain.(Baratta, et al.2014)

### **3. 1. Medicines which prolong postoperative analgesia**

Pain free surgery can be achieved with use of techniques and drugs which provide adequate intraoperative and prolonged postoperative pain relief. Gabapentin is an anticonvulsant that is effective in the treatment of chronic neuropathic pain. It has been suggested that perioperative administration of gabapentin is efficacious for postoperative analgesia, preoperative anxiolysis and prevention of chronic post-surgical pain. (Kong & Irvin 2007) We studied the effect of pre-emptive administration of this drug on post-operative pain relief after day-case gynaecological procedures. (Kalu, et al.2019) We found that gabapentin 300mg given orally two hours prior to surgery decreased postoperative analgesic requirements and prolonged the time to first rescue analgesic request with minimal side effects.

To identify medicines with greater potency and longer duration of analgesic effects, we conducted a randomised controlled study during which we compared the postoperative analgesic efficacy of diclofenac and pentazocine after caesarean delivery done under spinal anaesthesia. Prior to this study, pentazocine was being used in our hospital as an effective labour analgesic. It was also frequently being prescribed parenterally for relief of moderate to severe acute postoperative pain. When administered intramuscularly for relief of postoperative pain, 30-60mg of pentazocine has similar analgesic action to 10mg of morphine or 100mg of pethidine (Henderson K 2008).

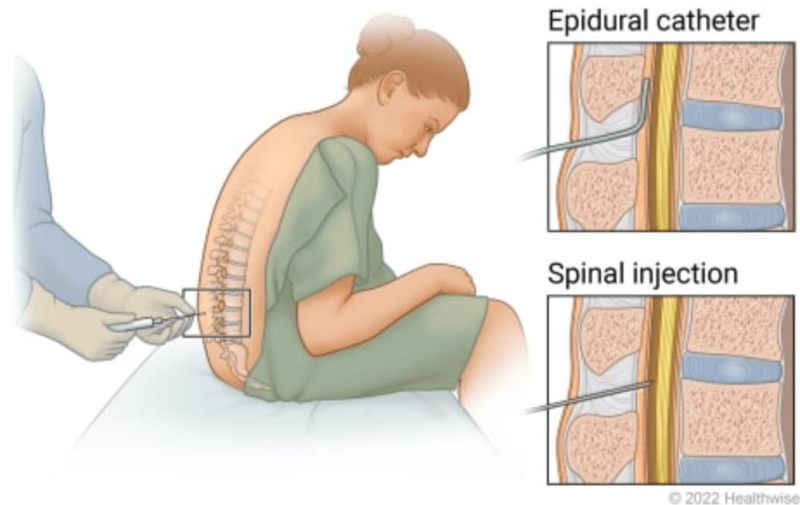
However, we found that intramuscular diclofenac 75mg, provided longer duration of analgesic effects after caesarean section, compared to intramuscular pentazocine 30mg. (Nwagwu, et al.2016). This discovery implies that diclofenac can be used instead of pentazocine to relieve severe postoperative pain. Respiratory depression, postoperative nausea and vomiting which are known side effects of pentazocine may then be avoided in addition to better analgesia.

### **3. 2. Use of regional anaesthetic and analgesic techniques**

Pain signals can be prevented from reaching the brain by injecting in or around the nerves with drugs known as local anaesthetics. These include lidocaine, bupivacaine and others. This can be performed with either an injection into the nerve or nerve sheath itself, the spinal cord, or the area just outside the spinal cord or a combination of these places. When the anaesthetic is injected into or near the nerve itself, this is referred to as a peripheral nerve block. The anaesthesia can last for several hours if a long-acting local anaesthetic is used. The anaesthesia or analgesia can be prolonged by placing a small plastic tube into the area of the nerve sheath and injecting it, through the tube, either continuously or intermittently for several days. This can be used to achieve a pain-free post-operative period.

When the local anaesthetic is injected just outside the spinal cord, but within the spinal canal, it is referred to as epidural block. This technique is commonly used to relieve the pain pregnant women experience during labour and delivering of

babies (see figure 6). Regional anaesthesia when used for pain relief in labour is the most effective form of analgesia in labour (Elton, et al. 2007). It reduces maternal pain, cardiovascular work and anxiety with minimal effect on the foetus (Ebirim, et al. 2012).



### **Figure 6. Epidural Analgesia in labour**

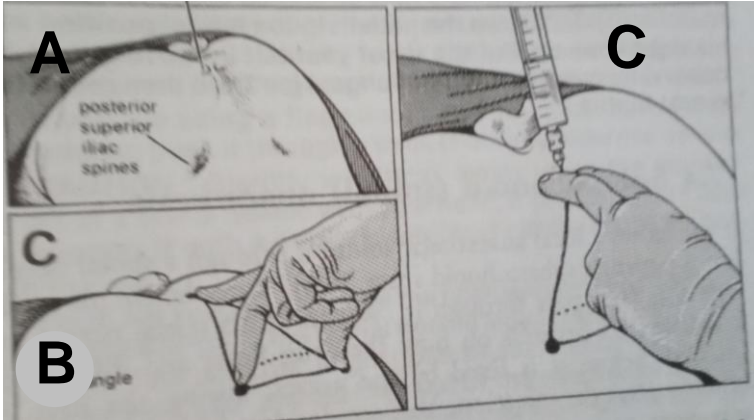
They are most often given by inserting a small flexible plastic tube through a needle into the epidural space. The needle is withdrawn, and the small plastic tube, called epidural catheter, remains lying alongside the spinal cord. (see figure 6 A) Anaesthetic and analgesic medications can be injected through the tube to relieve pain or completely anaesthetize the areas served by the nerves in the area. This can be used by itself or in conjunction with general anaesthesia to produce pain relief for surgical operations in the lower parts of the body below the umbilicus. Since the epidural catheter can be left in place for several days, the pain relief can be prolonged for several days.

The other technique for use of local anaesthetics is by injecting it into the spinal canal to mix with the spinal fluid. (see figure 6B). this is referred to as spinal anaesthesia or subarachnoid block (SAB). These also give profound anaesthesia and pain relief and can last for many hours if long-acting agents are used. This technique can also be modified to relieve the pain of labour or caesarean section if needed. One of our studies showed that addition of midazolam to a bupivacaine morphine co-mixture, significantly prolonged the duration of spinal analgesia without affecting ambulation or causing any considerable maternal or neonatal adverse effects. (Onah.et al 2022).

A combination, of epidural and spinal anaesthesia (CSE), offers the advantage of early onset and prolonged duration of pain relief. (Otokwala&Ebirim 2018).

Peripheral nerve blocks, epidural blocks and subarachnoid blocks are collectively referred to as regional nerve blocks. Each of these techniques can be modified to provide prolonged pain relief in the period after a surgical operation.

Caudal anaesthesia is a form of epidural anaesthesia in which the local anaesthetic drug is injected through the hole at the bottom of the patient's sacral bone referred to as the sacral hiatus. It is commonly used in children and sometimes in adults for surgical anaesthesia and postoperative pain management, particularly for some anal, perineal, urological, gynaecological and obstetric operations that do not involve the anterior abdominal wall. (see figure 7)



**Figure 7. Caudal Anaesthesia**

In another study we compared the postoperative analgesic effect of the combination of caudal bupivacaine and rectal diclofenac with caudal bupivacaine and rectal paracetamol in children scheduled for day-case inguinal herniotomy. We found that caudal bupivacaine and rectal diclofenac combination provided a more prolonged postoperative pain relief and lower pain scores compared to caudal bupivacaine and rectal paracetamol combination or caudal bupivacaine alone (Nnaji. et al.2017)

We also compared the analgesic efficacy of bupivacaine and preservative-free S (+) ketamine when used for caudal block in children. Prior to this study, we only administered ketamine, intramuscularly or intravenously as the analgesic component of general anaesthesia. We had no experience of its use by the caudal route. We found that caudal S (+) ketamine (1mg/kg) is superior to (0.25%) bupivacaine (1ml/kg) in the duration of analgesia for herniorrhaphy in children. (Ilo. et al2022)

In another study, we compared the block characteristics of spinal bupivacaine alone and spinal bupivacaine with dexmedetomidine for lower abdominal surgeries. We found that spinal anaesthesia using hyperbaric bupivacaine plus dexmedetomidine provided adequate and more prolonged sensory and motor block than hyperbaric bupivacaine alone, but it also resulted in lower blood pressure readings during most of the study periods. (Uwandu,2016). This result demonstrated that a combination of drugs with different mechanisms of action produced greater analgesic efficacy than when either of them is used alone.

We also performed a study with epidural bupivacaine anaesthesia for surgical excision of an advanced sarcoma of the left thigh, The patient had haemoptysis, and his chest x-ray film showed canon ball secondary deposits in the lungs. Adequacy of ventilation and oxygenation under general anaesthesia was uncertain due to impairment of lung functions. A regional anaesthetic technique was more suitable in this case than general anaesthesia. Subsequently, continuous infusion of epidural bupivacaine and fentanyl, through the epidural catheter, was used for postoperative pain management. Adequate surgical conditions were provided. Blood loss was reduced while the technique was used to provide prolonged, safe and satisfactory postoperative analgesia. (Soyannwo& Ebirim 1999). We later used this technique for surgical excision of a huge neurofibromatosis of the left thigh (see figure 8), with the same satisfactory result, both for pain relief and reduction in operative blood loss. (Ebirim &Kejeh 2011).



**Figure 8: Neurofibromatosis of left thigh excised with epidural anaesthesia in UPTH**

We then employed bupivacaine epidural analgesia as part of a multimodal pain management technique after myomectomy. Surgery of 105 minutes duration was performed under epidural anaesthesia obtained by injection of 15mls of 0.5% plain bupivacaine. Intraoperative analgesia was adequate (1/10) on a numerical rating pain (NRS) scale. In the recovery ward whenever pain score increased to 4/10, postoperative top up epidural analgesia using 10 ml of 0.25% bupivacaine was administered through the epidural catheter which was left in-situ. This was continued in the first 24 hours, post-surgery. Analgesia was satisfactory throughout the study period. We concluded that optimal intraoperative and postoperative pain management interventions are available. The limitations to their availability, especially in resource-poor settings are paucity of skilled manpower and infrastructural challenges. (Okubuiro, et al.2018)

## **4.0 CHALLENGES TO PAIN FREE SURGERY**

### **4.1 Adverse effects and complications of drugs used for relief of perioperative pain**

Some medicines used for relief of perioperative pain have side effects that limit their usage. Some anaesthetic techniques are associated with complications which require further research to make their uses safer.

#### **4.1.1. Vasopressors and regional anaesthetic techniques**

Regional anaesthetic techniques such as spinal and epidural anaesthesia can provide prolonged and optimal perioperative pain relief for surgical procedures in the lower half of the body. Both anaesthetic techniques, however, can be complicated by hypotension. (Sule, et al.2005) The incidence of hypotension following spinal anaesthesia can be as high as 70%-80% when pharmacological prophylaxis is not used. (Ansari et al 2011; Loubert C 2012) Blood volume expansion with intravenous fluids, and vasopressor drugs such as ephedrine may be used to prevent or treat hypotension following spinal or epidural anaesthesia. Reactive hypertension and tachycardia may complicate the use of vasopressors if excessive doses are administered. We therefore compared the efficacy of prophylactic intravenous ephedrine 3mg with 6mg ephedrine in the prevention of spinal anaesthesia-induced hypotension in patients undergoing lower abdominal general surgical procedures. We found that 3mg prophylactic intravenous ephedrine was as effective as ephedrine 6mg in reducing the incidence and severity of spinal anaesthesia-induced hypotension during lower abdominal surgeries. (Okubuiro, et

al.2017). We therefore recommended prophylactic use of the lower and safer dose.

#### **4.1.2. Undesirable lower limb weakness.**

Local anaesthetic medicines used for regional anaesthetic techniques also cause skeletal muscle relaxation. Use of these techniques for pain relief after surgery may result in a patient who does not feel pain but cannot stand up and walk. We have found in one of our studies that the severity of this weakness of lower limb muscles and how soon the patient recovers from it, depends on the dose of local anaesthetic used for the procedure. (Nweze et al. 2018). The lower the dose of the drug used, the less the lower limb weakness and the shorter the recovery time.

Very low doses of local anaesthetic drugs when used alone may not achieve enough pain relief. Addition of low doses of an opioid drug such as fentanyl or morphine, may result in adequate pain relief. This concept is called multimodal analgesia. Multimodal analgesia is a pain management strategy that involves using multiple classes of analgesic agents to effectively control pain. By minimizing the doses of the individual drugs used, their undesirable effects are also reduced. This was demonstrated by the result of the study in which we combined appropriate low doses of bupivacaine, morphine and midazolam (Onah, et al. 2022).

Other complications of regional anaesthetic techniques such as post-dural puncture headache, infections of the central nervous system, chronic low back pain, neurological injury affecting

the lower limbs and control of urinary bladder function. The incidence of these complications can be reduced by careful use of the regional anaesthetic techniques, but further research is required to eliminate them.

#### **4.2. Difficulty in attracting early career doctors into Anaesthesia and pain management specialties**

Mr Vice Chancellor Sir, the saying that “the harvest is plentiful, but the labourers are few” (Gospel of St Luke, Chapter 10, verse 2), also applies to the quest for surgery without pain. Studies have shown that anaesthesia has faced challenges in attracting would be specialists (Akinyemi & Soyawo 1980, Eguma, et al 2005). Pain management subspecialty has faced similar difficulties (Buowari & Ebirim 2021, Weissman C et al. 2023) Low levels of interest by final year medical students and intern medical doctors, who are potential specialists, is responsible for shortages of practitioners in these specialties. Some of the reasons for the lack of interest, include that these specialties have not been considered prestigious by their colleagues and the populace, difficult working conditions and much pressure at work, both during and after residency training. Most participants in this study (Weissman C et al 2023), stated that improvements in working conditions and remunerations would make these specialties more appealing to them.

We found in our study that formal academic mentoring enhances interest in less attractive and unpopular medical specialties and subspecialties. And yet this mentoring

programme was lacking in Nigerian doctors' residency training programme (Buowari and Ebirim 2020). Also, this mentoring programme has been found to be strategic in addressing capacity challenges among health care workers in another Nigerian teaching hospital. (Okereke, Tukur, Ogini and Obonyo 2015). We therefore recommended the establishment of a formal mentoring programme for resident doctors in our hospitals to reduce this shortage.

### **4.3. Paucity of research on relief of perioperative pain**

There is a noticeable lack of research, focused on perioperative pain management. It may be because a significant percentage of medical practitioners lack adequate basic or postgraduate training in pain management, hindering effective treatment and communication of experiences gained in practice. It may also specifically be due to lack of interest or training in research.

Effective mentorship programmes for our medical students and resident doctors may be a solution. The process of mentoring involves an experienced person with more knowledge and skill referred to as a mentor who guides, directs, teaches, counsels, imparts and transfers skills and knowledge to a less experienced person known as the mentee. (Yeung, Nuth & Stiel 2010, Zayyan, Madugu, Ameh, Oguntayo, Adesiyani & Saad 2016). Result of a mentoring programme at a medical college in Northern India has shown that mentees benefitted from the mentoring programme as they had career advancement and enhanced research interest. (Kukreja, Aura & Singh 2017).

We studied the perception of anaesthesia resident doctors concerning journal club meetings. Journal clubs are used in

medical education to promote the discussion and critique of research. We found that most (84.71%) of the participants were aware that the journal club meetings contributed to improvements of their education and professional careers, but the quality of the journal club meetings then was low (Nwagwu & Ebirim 2014). By applying the results of this study, we achieved a significant improvement in the understanding of research design and participation of our resident doctors in performance of research projects, including studies on perioperative pain management.

#### **4.4. Inadequate assessment and documentation of pain severity**

Some studies have shown that postoperative pain is infrequently assessed, and even when this is done, the values are poorly documented (Abdalrahim, Majali & Bergbom 2008, Bergerron, Leduc, Marchan & Bourgault. 2011). In one of our studies, we recommended that all relevant details of perioperative patient care, including pain management should be documented). Also, accurate record keeping should be emphasized in the training of anaesthetists (Ebirim & Buowari 2013).

#### **4.5. Lack of surgical patient involvement in decision making for their pain relief**

Very often, the physician chooses medications and pain relief techniques to be used for the surgical patients without involving them in the decision making. But we found in one of our studies that a major cause of dissatisfaction after use of

regional anaesthetic techniques was inadequate preoperative information to patients (Nweze, Ebirim, Alagbe-Briggs 2022).

Patient involvement in pain relief decision making is strongly associated with better rates of patient satisfaction (Holzel, Kriston & Harter 2013). In one study, 94% of patients wished to be involved in shared decision-making, and overall satisfaction ratings of 12% ‘satisfied’ and 88% ‘very satisfied’ were achieved (Flierler, Neubling, Kasper & Heidegger 2013). We found in another study that preoperative psychological preparation using patient education resulted in less pre and postoperative anxiety, reduced postoperative pain, better quality of life and patient satisfaction (Okubuiro & Ebirim 2019). Surgical patients need to be well informed about options for pain relief being considered. They also need to be provided with relevant information on all aspects of their treatment, such as the benefits and risks of a given procedure. This has been shown to improve pain relief and patient satisfaction after surgery (Sjoling, Nordahl, Oloffson & Asplund 2003).

#### **4.6. Inadequate financial support to adopt necessary pain relief methods**

We found in one of our studies, that paucity of skilled manpower and infrastructural challenges were limitations to availability of optimal intraoperative and postoperative pain management interventions. This occurs particularly in resource poor settings (Okubuiro, Ebirim & Okoli 2018). Some equipment used to administer perioperative pain medicines are costly. These include syringe pumps and patient-controlled

analgesia (PCA) devices. Inadequate financial support for a surgical centre may result in their not being available for use. Inability or unwillingness of purchasers of healthcare services to pay, have been identified as impediments to improving the management of postoperative acute pain (Meissner et al 2015). We found in one of our studies that an important reason for postponement of elective surgical procedures in our hospital was inability of the patients to pay for the surgery. We found that 26.67% of the patients scheduled for orthopaedic surgical procedures had their surgeries postponed because they could not pay. This included failure to pay for the necessary pain medications (Ebirim, Buowari& Ezike 2012). Majority (69%) of health care financing in Nigeria is from out of-pocket payments made by the patient to the health care provider. Nigeria's expenditure on health care is very low and domestic resource mobilization for health care is weak. A health care financing system that can sustain and improve health care delivery to the whole population irrespective of the patient's financial status is needed (Ogbodo O C. 2023).

## **5.0 FUTURE RESEARCH FOCUS**

My future research will be focused on making perioperative pain relief efforts, safer and more effective.

### **5.1. Collaborative studies with other perioperative pain management disciplines**

Collaborative studies are ongoing with surgical colleagues in UPTH and two other tertiary health care institutions in Nigeria, to identify potent long-acting non-opioid analgesics with minimal side effects when used for perioperative pain relief.

The results may eliminate side effects of opioid drugs use, such as respiratory depression, nausea, vomiting and itching.

## **5.2. Studies to improve safety of regional anaesthetic techniques such as epidural and subarachnoid blocks.**

Future studies will also be focussed on how to reduce or eliminate complications of regional anaesthetic technique such as post dural puncture headache, chronic low back pain and neurological injuries affecting the lower limbs and urinary bladder. Alternatives to epidural and subarachnoid blocks such as peripheral regional nerve blocks and transversus abdominis plane blocks will be explored.

## **6. RECOMMENDATIONS**

The quest for pain prevention and relief when patients undergo surgical operations will be more successful if the following recommendations are implemented

### **1. Multidisciplinary team approach in perioperative pain management**

Postoperative pain should be managed by a team comprising the surgeon, the anaesthetist, the ward nurses, the pharmacist and the physiotherapist. It should not be managed by the surgeon or anaesthetist alone. The anaesthetist can be in overall charge of the team due to his or her special knowledge of pain management. This arrangement will enhance the knowledge and skills of all healthcare professionals involved in postoperative pain management and lead to more effective pain relief.

## **2. Multimodal techniques of pain relief**

Multimodal analgesia is already in use for perioperative pain management. Combining an opioid and a non-opioid analgesic, with or without a regional anaesthetic block enables pain to be targeted at different points along the pathway for pain impulse activation, transmission and perception as shown in figure 2. A lower dose of each of the drugs in the combination is usually required and the individual side effects of the drugs are reduced. An additional requirement is that the beneficial and adverse effects of the drugs in the combination should be known and considered.

## **3. Patients' involvement in decision making**

Surgical patients should be involved in the decision regarding their own pain relief methods. For this to be meaningful, relevant information should be provided so they are well informed about the various options available and allowed to choose.

## **4. Accurate assessment and documentation of pain severity should be implemented**

*Postoperative pain severity should be frequently assessed using well established tools such as visual analogue scale or numerical rating scale. These scales provide an effective means of quantifying pain severity. The values obtained should be accurately documented. This also enables the pain relief practitioner; determine the effectiveness of the drug or technique used.*

## **5. Better professional education of the pain management team**

*Various members of the pain management team should receive adequate education and training which will enhance their skills and knowledge. Appropriate tools for assessment of their knowledge and skills should be used.*

## **6. Better health care financing**

*Budgetary allocations for health care by Governments in Nigeria are presently very low. This limits the capacity of hospitals to provide needed services. Better financing of hospitals by Governments or NGOs, will enable the managers provide needed drugs and equipment for pain relief. The coverage of Nigeria's National Health Insurance Scheme (NHIS) needs to be expanded. All citizens should be encouraged to enrol. And the scheme should cover all surgical treatments offered in Nigeria. With better financing, these hospitals may be able to adopt new pain management technologies such as Patient controlled analgesia (PCA). Indigent surgical patients may have easier access to needed pain relief. The hospitals may also be enabled to implement new research findings on pain prevention and relief. A common jingle in this part of the world agrees with this. (see figure 9).*



*Figure 9. Beta soup na money killam (and person weysabi cook)*

## **7.0 CONCLUSION**

Surgery without pain can now be performed in some parts of the body. Regional anaesthetic techniques when properly used with adequate pre-operative patient education, may provide the surgical patient with a completely pain free intra and postoperative course. However, paucity of skilled manpower and infrastructure are some of the barriers to its realisation,

especially in resource poor environments. Further search for safe and long-acting, parenteral analgesic drugs devoid of narcotic effects is needed. Their availability may ensure complete freedom from pain when surgery is performed in the parts of the body not amenable to use of regional anaesthetic techniques.

Involvement of surgical patients in decision making concerning their pain relief and adoption of better methods of imparting knowledge and skills to pain relief professionals will enhance the quest. Better funding for the hospitals by Government or non-governmental organisations (NGOs) is crucial.

Mr Vice Chancellor Sir, I have shared my insights on the QUEST FOR SURGERY WITHOUT PAIN. The journey so far has been fruitful but incomplete. So, it will continue.

## ACKNOWLEDGEMENTS

My gratitude first goes to the Almighty God for giving me life and enabling me to appear before this distinguished audience on this very happy day. The event of today is a dream come true. It is God's doing, and it is marvellous in my eyes. (Psalm 118: 23).

I am grateful to the Vice Chancellor of this great University of Port Harcourt, Prof Owunari Abraham Georgewill, for approving the delivery of this Inaugural lecture and for providing the enabling environment which allows us to contribute meaningfully to the University and society. My heartfelt gratitude also goes to the Deputy Vice Chancellors: Prof. Chukwudi Onyeaso, (Administration), Prof Rosemary Ogu (Academic), and Prof Angela Frank Briggs, (Research and Development). I also thank the Registrar Dr. Gloria Obiageri Chinda, the Bursar, Dr Godspower Obah and the University Librarian, Prof Helen Emeasalu for their invaluable support. I wish to pay special tribute to the Inaugural Lecture Screening Committee members for their sterling dedication to excellence in the screening of Inaugural lectures.

The sweetest of God's manifold gifts to me is a wonderful family. I wish to express my deep gratitude to my lovely wife, Dr (Mrs) Ethel Ihuarulam Ebirim, who has been my pillar of support for the over forty years of our married life. She has provided a conducive home front during this period. This has made all my modest intellectual accomplishments possible. I specially thank my children: Barrister (Mrs) Ugochi Bosah, Dr Obinna Ebirim, Pharmacist Ogadinma Joseph Ebirim, Engr (Dr) Kelechi Ebirim

and Miss Ngozichukwu Janet Ebirim, for their love and strong support for me during this eventful journey.

My late father, Nze Joseph Ebirim was a great lover of education. He led his co-workers from the Public Works Department (PWD) in the construction of buildings for the University of Port Harcourt near Mile 3, Diobu, in 1967. Their efforts were truncated by the Nigerian civil war of 1967-1970. He later had the privilege of attending the University of Port Harcourt Convocation ceremony on 20th January 1990 when one of his sons and one of his granddaughters graduated from our Faculty of Engineering.

My great mother never had the privilege of a formal education. However, she made up for this by giving my father, ten unique children. Did he complain? Not likely. Three of us became university professors. Engineers and successful business leaders are among us. She taught us to love God and be industrious.

I wish to pay tribute to my late elder brother, Dr. C.O.J. Ebirim. He was the first Head of Department of Accounting in the University of Port Harcourt. He advised me to do Residency Training in Port Harcourt. This led me to become a lecturer in the University of Port Harcourt. I also wish to acknowledge my elder sister, Professor Mrs. Catherine Onye, Professor of Accounting Education at Imo State University, Owerri. She ably filled the void created when our biological parents went to be with the Lord. I also acknowledge my junior sister Prof. Mrs Ugochi, my younger brother Rev. Engr. Maxwell, correct Chaplain at Chapel of Redemption River State University, my junior brother Victor Ebirim, Corporate sales manager, Sigma Coatings Nig. Ltd. Port

Harcourt, my junior sister Miss Eucharia Ebirim and Mrs Eunice Onumajuru.

Late Dr Sylvester Ogorika Deinsah, who later became the Amapre (King) of Trofani Kingdom in Bayelsa State, wished to see this day. He was Head of the Department of Anaesthesiology, University of Port Harcourt Teaching Hospital (UPTH) from 1985 to 2001. He gave me the opportunity to start the Anaesthesia journey in the Department. He guided and cared for me as if I was his biological son, while he was physically with us. My Path Finder Prof. Ndu Eke took me to him and he was very good to me.

I will remain grateful to my teachers at University of Ibadan (UI), and the University College Hospital (UCH), Ibadan. Late Professor Christopher Ekundayo Famewo was Head of Anaesthesia Department of UCH, Ibadan. He opened the door for me to come in and train as an Anaesthetist. This was necessary because the UPTH Department of Anaesthesiology, was not accredited for Residency Training then. Dr. Mrs. PT Sotunmbi, Associate Professor of Anaesthesia at University of Ibadan, insisted that my training in Anaesthesia should not end at the level of University Postgraduate Diploma. She made me go ahead and train as a fellow of the Postgraduate Medical College.

Permit me to mention other female Angels in that Department. Among them was Professor Mrs. OA Soyannwo, who converted me to the creed of pain relief practitioners, Professor Mrs. Eniola Elegbe, Professor Mrs. AA Sanusi, and late Professor Mrs. SD Amanor-Boadu. My profound gratitude also goes to Professor Mrs. Sylvia George Akpan, former Head of Anaesthesia

Department, University of Calabar Teaching Hospital, Professor Christie Mato, former Provost, College of Health Sciences, University of Port Harcourt and later former Acting Vice Chancellor PAMO University of Medical Sciences, Port Harcourt. I shall remain grateful for all their efforts to ensure successful completion of my Residency Training in Anaesthesia.

I am grateful to the Management of the UPTH for supporting my supernumerary postings in the Anaesthesia Department of the UCH Ibadan. I appreciate the helpful cooperation I received from Dr Mrs. BOI Onajin-Obembe, Alabo Dr. BA Aprioku, Alabo Prof. Sotonye Fyeface-Ogan, Dr UU Johnson, Dr OT Alagbe-Briggs, Dr JG Otokwala, and Dr AT Aggo, the current Acting Head of Anaesthesiology Department (University of Port Harcourt) and the Head of Department, UPTH, and other Consultants and Resident Doctor Anaesthetists within and outside the UPTH.

I owe a huge debt of gratitude to many senior colleagues and contemporaries in the UPTH and the University of Port Harcourt who gave me a lifting hand in this epic journey. They include Professor Aniekan Ekere, the first Professor of Orthopaedic Surgery in the University of Port Harcourt and UPTH, Professor Patrick Eghrudjakpor, former Dean, Faculty of Clinical Sciences, and Professor Anaele Ihekwoaba, former Associate Dean, Faculty of Clinical Sciences. Professor CN Mato and Professor Alice Nte, patiently read and suggested corrections to the manuscript of this inaugural lecture. To these kind-hearted helpers and many others whose names I could not mention due to limited space, I pray that God will always send you help at your time of need.

## REFERENCES

Akinyemi OO, Soyannwo OA. 1980. The choice of anaesthesia as a career by undergraduates in a developing country. *Anaesthesia*. 35: 712-715.

Amanor-Boadu SD. 2015. Balancing the analgesia in anaesthesia: Opioid availability in Nigeria. First Ogunlesi Annual Lecture.

Ansari T, Hashem MM, Hassan AA, Gamassy A, Saleh A. 2011. Comparison between two phenylephrine infusion rates with moderate co-loading for prevention of spinal anaesthesia-induced hypotension during caesarean section. *Middle East J Anesthesiol*. 21: 361-366.

Baratta JL, Schwenk ES, Viscusi ER. 2014. Clinical consequences of inadequate pain relief: barriers to optimal pain management. *Plast Reconstr Surg*. 134 (4.Suppl 2): 15S-21S.

Brennan F, Carr DB, Cousins MJ. 2007. Pain management: A fundamental human right. *Anesth Analg*. 105: 205- 221.

Buowari DY, **Ebirim LN**. 2020. Mentoring: a survey of resident doctors in a developing country. *Yen Med J*. 2 (4): 90-94.

Buowari DY, **Ebirim LN**. 2021. Subspecialisation in anaesthesia amongst anaesthesiology resident doctors in Port Harcourt Nigeria. *Yen Med J*. 3(4): 205-211.

**Ebirim LN**, Buowari DY, Ezike HA. 2012. Causes of cancellation of elective surgical operations at a university teaching hospital. *J Med Med Sci* 3 (5): 297-301

**Ebirim LN**, Buowari OY, 2013. Record keeping by anaesthetists in a developing Country. *Afrimedical Journal*. 4(1): 29-31.

**Ebirim LN**, Buowari OY, Ghosh S. 2012. Physical and psychological aspects of pain in obstetrics. In: *Pain in perspective*. London; Intech; P. 219-236.

**Ebirim LN**, Kejeh BM. 2011. Perioperative management for excision of plexiform neurofibromatosis complicated by massive blood loss. *Port Harcourt Med J*. 6 (1): 110-115

**Ebirim LN**, Tobin M. 2011. Factors responsible for preoperative anxiety in elective surgical patients at a University Teaching Hospital: a pilot study. *The Internet Journal of Anesthesiology*. 29(2): 2.

Eguma S A, Mato CN, Nabh NK. 2005. Anaesthesia as a career choice among Nigerian Medical Students. *World Anaesth*. 8(3): 37-40.

Elton CD, May A, Buggy DJ. 2007. Obstetric anaesthesia and analgesia. In: Aitkenhead AR, Smith G, Rowbotham DJ. *Textbook of anaesthesia*, 5th edition. Churchill Livingstone Elsevier. London. 617-652.

Famewo CE. 1993. For some must watch while some must sleep. University of Ibadan Inaugural lectures.

Fierer WJ, Neubling M, Kasper J, Heidegger T. 2013. Implementation of shared decision-making in anaesthesia and its influence on patient satisfaction. *Anaesthesia*. 68: 713-722

Gan TJ. 2017. Poorly controlled post-operative pain: prevalence, consequences and prevention. *J Pain Res*. 9(10): 2287-2298.

Gospel of St Luke Chapter 10, verse 2. Holy Bible, New King James version.

Handerson K. 2008. Pentazocine. *Update in anaesthesia* 24 (1): 8-12.

Holzel LP, Kriston L, Harter M. 2013. Patient preference for involvement, decisional conflict, and satisfaction with Physician: a structural equation model test. *BMC Health Services Res*.13: 231.

Ilo SI, Erondu MA, **Ebirim LN**. 2022. A comparative study of caudal block with bupivacaine or preservative-free S (+) ketamine for herniorrhaphy in children. *International Journal of Medical and Health Research*. 8(2): 33-39.

Kalu EI, Alagbe-Briggs OT, **Ebirim LN**. 2019. Pre-emptive oral gabapentin and effects on post-operative pain after day-case gynaecological procedures. *Journal of One Day Surgery*. 29.3 .

Kolawole IK, Fawole AA. 2003. Postoperative pain management following caesarean section in University of

Ilorin Teaching Hospital (UIH) Ilorin Nigeria. West Afr J Med. 22(4): 305-309

Kong VKF, Irvin MG. 2007. Gabapentin: A multimodal perioperative drug? BJA. 99(6): 775-786

Kukreja NC, Kaur A, Arora R, Singh T. 2017. Introducing mentoring to first year medical students in a private medical college in Northern India: a pilot study. Int J Appl Basic Res. 7: 367-377.

Loubert C. 2012. Fluid and vasopressor management for caesarean delivery under spinal anaesthesia: Continuing professional development. Can J Anaesth. 59: 604- 619.

Mato CN. 2014. The Anaesthetist: Working behind the scene, Ever present, Ever -watchful. University of Port Harcourt inaugural lecture series. Number 107.

Meissner W, Coluzzi F, Fletcher D, et al. 2015. Improving the management of postoperative acute pain: Priorities for change. Current Medical Research and Opinion. 31(11): 2131-2143.

Nnaji CT, Onajin-Obembe B, **Ebirim LN**. 2017. The analgesic effects of rectal diclofenac versus rectal paracetamol following caudal-bupivacaine for pediatric day-case inguinal herniotomies: A randomized controlled prospective trial. Journal of Pediatric Surgery. 52(9): 1384-1388

Nwagwu CC, **Ebirim LN**. 2014 Perceptions of Nigerian anaesthesia resident doctors concerning journal club meetings-a pilot study. J Med. Med Sci. 5(7): 141-146.

Nwagwu CC, **Ebirim LN**, Ojule JD, Ezike HA. 2016. Comparative study of parenteral diclofenac and pentazocine for post-caesarean analgesia after subarachnoid block. *African Journal of Anaesthesia and Intensive Care* 16(2): 17-24.

Nweze UO, **Ebirim LN**, Alagbe-Briggs OT. 2018. Recovery profile of low dose hyperbaric bupivacaine for spinal anaesthesia in day-case gynaecological procedures: a randomised controlled trial. *New Journal of One Day Surgery*.

Nweze OU, **Ebirim LN**, Alagbe-Briggs OT. 2022. Patients' satisfaction with spinal anaesthesia for day-case gynaecological procedures. *Medical Journal of Zambia* 49(4): 337-341.

Ogbodo OC. 2003. Trends and challenges of health care financing in Nigeria. *International Journal of medical case reports and reviews*. 2(5): 1-12

Okereke E, Tukur J, Ogini AB, Obonyo B. 2015. Evaluating health workers knowledge following introduction of mentoring in Jigawa state of Northern Nigeria. *Afri J Repr Health*.19(3): 118-125.

Okubuiro EO, **Ebirim LN**. 2019. The evidence for relevance of psychological preparation for patients who are awaiting surgery: a narrative review. *International Journal of Medical and Health Research*. 5(3): 11-15.

Okubuiro EO, **Ebirim LN**, Okoli CE. 2018. Post myomectomy pain management at University of Port Harcourt

Teaching Hospital, Nigeria. A case report/critical analysis. *Pyrex Journal of Medicine and Medical sciences*. 5(2): 7-12.

Okubuiro EO, Onajin-Obembe BOI, **Ebirim LN**. 2017. A Comparison of the Haemodynamic Effects of Low Doses of Prophylactic Intravenous Ephedrine in Spinal Anaesthesia for Lower Abdominal Surgeries. *African Journal of Anaesthesia and Intensive care*. 17(1): 1-6.

Onah DU, Aggo AT, **Ebirim LN**. 2022. Effect of intrathecal midazolam on single-dose morphine-bupivacaine co-mixture for spinal analgesia in labour. *International Journal of Research in Medical Sciences*. 10(4): 801-807.

Otokwala JG. **Ebirim LN**. 2018. Necessity of combined spinal epidural technique during open abdominal myomectomy for huge uterine fibroids. *Medical Journal of Zambia* 45(2): 106-111.

Psalm 118 verse 23. Holy Bible New King James version.

Raja SN, Carr DB, Cohen M, Finnerup NB, Flor H et al. 2020. The revised IASP Definition of pain: Concepts, Challenges and Compromises. *Pain*. 161(9): 1976-1982.

Reddi D, Curran N. 2013. An introduction to pain pathways and mechanisms. UCL London Global University. <https://www.ucl.ac.uk>.

Robinson DHL, Toledo AH. 2012. Historical development of modern anaesthesia. *J Invest. Surg*. 25(3): 141-149.

Sjoling M, Nordahl G, Oloffson N, Asplund K. 2003. The impact of preoperative information on state anxiety, postoperative pain and satisfaction with pain management. *Patient Education. Couns.* 51: 169-176

Soyannwo OA, **Ebirim LN**. 1999. Epidural anaesthesia for surgery in advanced cancer. *African Journal of Biomedical Research.* 2(1): 57-59.

Sule AZ, Isamade ES, Ekempu CC. 2005. Spinal anaesthesia in lower abdominal and lower limb surgeries: a review of 200 cases. *Nig J Surg Res.* 7(12): 226.

Uwandu CB, Fyनेface-Ogan S, **Ebirim LN**. 2016. A comparative study of block characteristics of spinal bupivacaine alone and spinal bupivacaine with dexmedetomidine for lower abdominal surgeries. *African Journal of Anaesthesia and Intensive Care.* 16(1): 1-7.

Weissman C, Avidan A, Tandeter H et al. 2023. Unpopular medical specialties: exploring the concept that “the customer knows best” *BMC Med Educ.* 23: 268.

Yeung M, Nuth J, Stiel IG. 2010. Mentoring in emergency medicine: the art and the evidence. *CJEM* 12(2): 143-149.

Zayyan MS, Madugu HN, Ameh N, Oguntayo OA, Adesiyan AG, Saad AA 2016. Acceptability of clinical teaching by mentorship among medical students in Nigeria. *Arch Int Surg.* 6: 195-200.

## CITATION



### **PROFESSOR LONGINUS NDUBUISI EBIRIM**

*MB,BS (Ibadan), PgDA (Ibadan), PgDA (WACS), FWACS, FICS  
Department of Anaesthesiology, Faculty of Clinical Sciences  
College of Health Sciences*

Professor Longinus Ndubuisi Ebirim was born on 20th September 1955, in Inyishi Ikeduru local government area (LGA) of Imo state, Nigeria. His parents were late Nze Joseph Ebirim and late Ezechinyerenwa Janet Ebirim. He is the 4th of his mother's ten children.

#### **Education**

He started his primary education at St Dominics Catholic school, Inyishi in Ikeduru LGA of present-day Imo state in 1963. He moved to Municipal Council School A, mile 2,

Diobu, Port Harcourt in 1967 to be in the primary six class but the Nigerian civil war caused the school to be forcefully closed. He later completed his primary education with Distinction at St Dominics School Inyishi. He attended St Columbas Catholic College, Amaimo, also in Ikeduru LGA between 1970 and 1974 and passed the West African School Certificate examination in division one. He gained admission into the College of Medicine, University of Ibadan in September 1975 and graduated with MB, BS degree in July 1981. He served as the Commandant of the Nigerian Red Cross Society, Detachment at St Columbas College Amaimo (1973 -1974) and the Secretary of Nigerian Red Cross Detachment at the University of Ibadan, (1977-1980).

### **Work as a Medical Doctor**

Dr Longinus Ebirim served the Imo state Hospital Management Board as a medical officer from August 1984 to February 1991. He was appointed a Senior House Officer in the Anaesthesiology Department of UPTH with effect from 1st March 1991. He did postings at the University College Hospital (UCH) Ibadan as a supernumerary Registrar from October 1992 to April 1994 and supernumerary Senior Registrar from January 1997 to October 1998. He passed the Part II Fellowship Examination of the West African College of Surgeons in the faculty of Anaesthesia in October 1999. By this he became the first doctor from UPTH Department of Anaesthesiology to successfully complete the residency training. He was elected a Fellow of the International College of Surgeons (FICS) in June 2023

He was appointed Lecturer I in the College of Health sciences, University of Port Harcourt in the year 2000, and an honorary consultant Anaesthetist in UPTH in 2001. He served as the Coordinator of Anaesthesiology Department in the University of Port Harcourt and Head, Department of Anaesthesiology in UPTH from 2006 to 2008. Due to his strong desire to inculcate the practice of research critique and execution by resident doctors in anaesthesia department of UPTH, he anchored their journal club meetings for so many years.

Dr Longinus Ebirim rose through the ranks to Senior Lecturer in 2012, Reader in 2019 and Professor in 2022.

### **Other services rendered**

Professor Longinus Ebirim has served as an examiner at all levels of Fellowship Examinations in the Faculty of Anaesthesia of the West African Postgraduate Medical College from October 2010 till date. He has supervised 18 successful part II Fellowship Dissertations of both the National and West African Post Graduate Medical Colleges. He also served as secretary of accreditation panel of Faculty of Anaesthesia, West African College of Surgeons to Departments of Anaesthesia, of Delta State University Teaching Hospital Oghara (2010), University of Calabar Teaching Hospital (2010 and 2013) University of Uyo Teaching Hospital (2013), Federal Medical Centre (FMC) Owerri (2015), FMC Umuahia (2016) and FMC Katsina (2019).

Professor Ebirim was the National Auditor of the Society for the Study of Pain Nigeria (SSPN), from 2011 to 2015 and the

Rivers and Bayelsa states Co-ordinator for the society from 2010 to 2019. He was Chairman, Local organising Committee for the annual scientific conferences of the SSPN held here in Port Harcourt in 2012 and 2019

Professor Ebirim has served as the Chairman, Court Estate Welfare Association (CEWA) (2010-2012) in Elingbu, Obio Akpor LGA, Rivers state, where he resides, and President Inyishi Town Union (ITU), Rivers State branch (2011-2021). He is presently an active member of the Catholic Men Organisation (CMO) at St John Catholic Church Rumuokwurusi in Obio Akpor LGA of Rivers State.

**Prof. Owunari Abraham Georgewill**

Vice Chancellor