

## Beliefs and perceptions of ear, nose and throat-related conditions among residents of a traditional community in Ibadan, Nigeria.

\*AO Lasisi and AJ Ajuwon

*\*Department of Otorhinolaryngology and African Regional Health Education Centre, Department of Health Promotion and Education, College of Medicine, University of Ibadan, Ibadan, Nigeria.*

### Summary

ENT-related conditions constitute a major burden of disease in Nigeria. The bulk of the available studies on these conditions are derived from hospital-based studies that underestimate the extent of the problem. Few studies have explored the perceptions of community residents on the causes and treatment of these conditions. This article describes findings of a qualitative study that explored the perception of residents of Foko, a traditional community in Ibadan, Nigeria. Five traditional healers were interviewed in-depth while four focus group discussions were conducted for men and women to determine perception of types, causation and treatment modalities for ENT-related conditions. The healers mentioned seven ENT-related conditions including ear discharge, deafness, epistaxis, nasal catarrh, sore throat, neck swelling and hoarseness. Informants and discussants attributed mainly spiritual attack as the cause of many of these conditions. Many of the treatment remedies used are topical, including use of efferin leaf (*Occimum gratissimum*) for nose bleeding and using cold red oil or honey to treat ear discharge. These procedures are dangerous and could aggravate the conditions. We discuss the implications of these findings for further research and clinical practice.

**Keywords:** *Traditional community, perceptions, beliefs, ear, nose and throat diseases.*

### Résumé

Les conditions liées à l'ENT constituent un problème majeur de maladie au Nigeria. La majeure partie des études sur ces conditions dérivent des études basées sur les rapports des hôpitaux, qui sous-estime la gravité du problème. Très peu d'études ont exploré la perception des communautés sur les causes et traitement de ces conditions. Cet article décrit les résultats d'une étude qualitative qui a exploré la perception des résidents de Foko. Une communauté traditionnelle d'Ibadan au Nigeria. Cinq guérisseurs traditionnels ont été interviewés profondément alors que des discussions avec quatre groupes focaux ont été entreprises pour les hommes et femmes dans le but de déterminer les types de perceptions, causes et modalités de traitement des conditions liées à l'ENT. Les guérisseurs ont mentionné 7 conditions liées à l'ENT englobant l'écoulement de l'oreille, la surdité, englobant l'écoulement de l'oreille, la surdité, épistaxis, le rhume, mal de gorge, enflure du cou et l'enrouement. Quant à la plupart des autres membres du groupe, ils ont attribué la majeure partie des causes de cette maladie à des attaques spirituelles. Un grand nombre des méthodes de traitement sont tropicales, comprennent l'usage des feuilles de l'effrine (*occimum gratissimum*) pour les hémorragies nasales et la mise de l'huile de palme humide ou du miel pour traiter l'écoulement de l'oreille. Ces procédures sont dangereuses et peuvent aggraver les conditions du patient. Nous discutons les implications de ces résultats dans le cadre de la recherche future et les pratiques cliniques.

Correspondence: Dr. Akeem O. Lasisi, Department of Otorhinolaryngology, College of Medicine, University of Ibadan, Ibadan.

### Introduction

The ear, nose and throat (ENT) infections are a group of diseases affecting the anatomical area of the ear, nose, paranasal sinuses, the throat and the neck [1]. The pathology could be due to infection, trauma and cancer [1,2]

ENT-related infections pose a major burden of disease in Nigeria. For example, clinical experiences at the University College Hospital (UCH), Ibadan, Nigeria, show that chronic ear infections are the most prevalent of these infections, accounting for about 20% of patient attendance at the Otorhinolaryngology (ORL) Clinic during the last five years (1996-2000). At the University of Nigeria Teaching Hospital, Enugu, Southeastern Nigeria, the prevalence of chronic ear infections was 53% [3]. Twenty-eight percent prevalence was also found among primary school pupil in Lagos [4]. In Sierra Leone, Seely et al<sup>5</sup> found the community prevalence of hearing loss to be 9.1% and identified chronic untreated or undiagnosed ear infections as the most strongly associated risk factors. Others investigators<sup>3,4</sup> identified socioeconomic factors, race, environmental and geographic factors as the risk factors for these infections.

The prevalence of chronic sinusitis in the UCH Ibadan was found to be 9 cases per year over a ten-year period and the lower socioeconomic class was the most commonly affected [6]. In a 3-year study (1982-1985) of the head and neck cancers at the Jos University Teaching Hospital, in Northern Nigeria, Bhatia [7] found the prevalence of the neck cancers to be 32%, nose and sinuses 24.7%, salivary glands 12.3%, nasopharynx 10.9%, oropharynx 5.5% and larynx 5.5%.

While these data give an indication of the burden of ENT-related infections, they were fraught with several limitations. First, all the studies are hospital-based indicating only a tip of the iceberg since many patients infected by these conditions do not present at the facilities. Consequently, the prevalence may have underestimated the real extent of the problem in the community. Second, our clinical experience in Ibadan, and those of others [3-5] from the West African sub-region show that many of the ENT patients present to the hospital at an advanced stage of the disease with threatening complications. Several factors including local beliefs and the fact that the patients have previously consulted alternative sources of care are responsible for this late presentation.

This article presents the qualitative findings of the perceptions and practices of the residents of Foko, a traditional community within Ibadan.

### Methods

#### *The setting*

Ibadan is the capital of Oyo State as well as of the former Western Region, thus with a metropolitan population of about 3 million it serves as a regional economic, cultural and educational centre in Southwestern Nigeria [8]. Foko is a predominantly Yoruba community, located in the inner core area of Ibadan. It is characterised by dense population, congested cement-plastered mud housing, unpaved road, lack of safe water supply and inadequate social amenities. The estimated population of the area is 20,000 [8]. The basic housing unit is the extended family consisting of a cluster of houses occupied by residents who



descended from a common ancestor. The men are predominantly subsistence farmers while the women are petty traders dealing in foodstuffs and household provisions.

#### *The in-depth interview*

The study population is the traditional healers in Foko. We conducted an in-depth interview for five traditional healers in the area. We first enumerated all the healers in Foko. Out of the eleven found, five were selected randomly and interviewed in-depth. The interview was conducted by one of the investigators (AL) in Yoruba, the language widely spoken in the study area. The items covered in the interview were types of ENT-related conditions they treat, the terminologies used, beliefs about the cause of each type of condition, their signs and symptoms and perceived outcome of treatment given to the clients. Each interview was recorded on audiotape and was later transcribed. The transcribed data were then subjected to content analysis to determine themes. Each interview was conducted in the homes of the healers at a time that they considered convenient. Prior to each interview, each healer was informed about the purpose of the study, the need to record interviews on audiotape and that their participation in the study was voluntary. All the healers approached agreed to participate in the study. The data from the in-depth interview was used to plan the next phase of the study, namely, focus group discussion.

#### *Focus group discussion*

In order to gain further insights into the local perceptions of ENT-related disorders we conducted four focus group discussions (FGD) for men and women in the study area. Based on the findings from the in-depth interview of healers we developed an FGD guide that consisted of eight questions that covered the broad areas explored with the healers. The questions were first drawn in English and later translated into Yoruba, so that participants can comprehend them. Six persons participated in each group discussion. As suggested by Kruger [9] a purposive sampling procedure was adopted for recruiting discussants. Thus, four homogeneous groups were set up. Two of these groups consisted of old men aged 60 years and above while the remaining two groups consisted of women of childbearing age. Old men were recruited because of our assumption that they were more likely than younger men to be informed about the causes and local terminologies used to describe ENT-related conditions in the community. Women of childbearing age were selected because many of the ENT conditions we see in our clinics are in childhood and being the major care providers for children they were better placed to discuss about the signs and symptoms of these conditions.

Potential discussants were approached, the purpose of the discussion was explained and they were invited to participate. In an unobtrusive manner, the names, age and sex all those identified were written down and these were later matched for age and sex. The potential participants were then invited to the venue of the discussion. One of the investigators moderated the group sessions. Each session was recorded on audiotape after which it was transcribed. The content of the data were then analyzed.

The combination of these two data collection methods led to triangulation of methods which has deepened our understanding of the perceptions of residents of Foko to ENT-related disorders.

#### **Findings**

The healers listed seven ENT-related conditions they had treated in the past. The local terminologies and their English translation

and their perceived causes are presented in Table one.

#### *"Oyun eti", "eti didun" (Suppurative ear disease)*

The majority (90%) of the informants perceived that ear diseases were more common in children than adults. Informants identified four causes of ear diseases. First, there is the belief of spiritual attack which is aimed at 'punishing the mother' of the affected baby. Secondly, the position adopted by a nursing mother when she is breast-feeding is another perceived cause. As one informant put it, "breast feeding of a baby in a lying down position may cause the breast milk to enter the ear through the hole connecting the back of the nose with the ear and then the ear will start discharging." Informants also believed that ear discharge may be caused by dirt and inadequate care as well as "ile tutu" (cold earth).

The FGD discussants held similar perceptions as the healers concerning causes of ear diseases. The majority (80%) believed that ear discharge is caused when a woman breastfeeds a child while lying down. Participants also perceived that an assault on the ear of the mother during pregnancy causes ear disease. As one participant stated, "a child will develop ear problem like this if the mother is slapped in the ears during pregnancy or she eats something which is forbidden in the family of the husband". Other causes identified by the participants were spiritual attacks and a belief that it is an act of God or boil in the ear.

Concerning treatment for ear condition, informants said they cared for it by putting cold red oil, locally called 'adi', honey and steaming hot red oil that is poured into the affected ear. According to one informant what he does is to "pour plenty of very hot red oil into the ear until the ear is filled up, this will kill the disease". Another common treatment method mentioned is the use of "the fat from a lizard" which is believed to be very effective. Other treatment modalities used are fluid from the intestine of a cockroach and alcoholic beverage including Schinapps and "ogogoro". Finally, a concoction of "ori" (cher butter) and red oil and egg and "agbo" (herbal extract), may be given to the sufferer to bath, drink and as ear drop. This concoction is also used to treat the other ear even if it is not affected because it is believed that the disease may spread to the other ear.

The majority (80%) of the discussants agreed to using cold red oil or honey or 'adi' (ear drop) as treatment. A few (10%) discussants said that they use the fluid expressed from the intestine of cockroach for treatment.

The informants and the discussants also preferred that should the problem persists, after applying these materials, then incantation and ritual sacrifices should be used for the treatment.

#### *Odi (Deafness)*

Informants believe that this condition is a supernatural disease caused by enemies of victims. Another cause of the disease is 'if the mother steals 'ito' (a running plant like melon) or 'eyin' (palm kernel) during pregnancy or she eats 'eewo' (a tabooed food in the family of the husband) during pregnancy'. As one informant put, "I have seen a woman who stole 'ito' during pregnancy and all the four children she had (one after the other) were deaf until she confessed and a sacrifice was made and the fifth child was of normal hearing. Many informants (40%) believe it could be due to 'Igbona' (fever).

On the other hand, the majority (90%) of the discussants believed that this condition is typically due to spiritual attack by the enemies of the affected person or the mother steals 'ito' (a running plant like melon) during the pregnancy.



though a few disagreed with the stealing of palm kernel as a cause of deafness. Many (50%) of the discussants believed that it could be due to "Ile tutu" (cold earth), "Igbona" (fever) or small pox.

Informants claimed that they treated this condition in various ways including preparation of a special soup made from herbs and some "eran abami" (strange meat) given to the person to eat, bath or combined with putting drops of oil and honey in the ear. However, rituals and incantation are the last resort if the problem persists. Discussants agreed that in general, they do not practice self-medication for this condition. Instead, they will take the child to a traditional healer who is believed to have the ability to treat it. When asked if they think that use of some types of drugs by a woman during pregnancy or prolonged labour could cause deafness, all the discussants agreed that this was not possible. On the contrary, discussants claimed that deafness is caused by "aye or omo eniyan" perceived enemies of affected person.

#### *Ohun hiha" (Hoarseness)*

Majority (80%) of the informants perceived the hoarseness as it is not usually a disease per se, it is usually caused by excessive noise or excessive talking. Few (20%) however, added that it could also be due to "Igbona" (fever), smallpox, cough or excess alcohol drinking or cigarette smoking. It may also be due to 'the enemies can seize the voice of a person thus cause hoarseness'. On the other hand, the majority (80%) of the discussants believed that it is usually due to spiritual attack from the enemies 'the enemies can seize a person's voice so as to punish him, a few believed it is caused by "Igbona" (fever) or cough. Informations mentioned many modalities for treatment of the condition. This includes drinking lime or orange by affected person and sucking the secretion from snail. The majority (90%) of the discussants also believe in the use of lime or orange and then taking the sufferer to an herbalist.

#### *Ofun didun (Sore throat)*

All the participants said it was a minor ailment that is believed to be caused if a person spits on the floor and another person steps on the saliva but a few (20%) informants added that it could be due to spiritual attack by the enemies. The treatment according to all the participants is the drinking of lime or orange.

The majority (90%) of the discussants say 'once a sufferer drinks lime or orange, the condition will subside but some (40%) of the discussants disagreed saying that ritual sacrifice may be necessary to appease the enemies in rare cases, although some disagreed with this opinion.

#### *(Amurun) Epistaxis*

Informants said that the main symptom of this condition is bleeding from the nose. The perceived causes are spiritual attack, trauma, having yellow eyes, "Igbona" (fever) and "Ile tutu" (cold earth). They however also believed that it could happen spontaneously without any particular cause in which case the bleeding was usually small. The majority (90%) of the discussants believed that it is commonly spontaneous without a particular cause and many (50%) attributed it to spiritual attack from the enemies. Some (30%) said it is due to excess blood in the body which is trying to force itself out of the body in order to normalize. A few (10%) attributed it to "Igbona" (fever), "Ile tutu" (cold earth) and yellow fever. One discussant said it is a disease of the brain and not the nose but the rest disagreed with this belief.

With regard to treatment, all the healers agreed that "effirin" leaf ("Occimum gratissimum") was typically used in various forms to treat this condition. While some (40%) used the leaf to block the nostril affected, others crushed it and put the paste into the nose. Another mode of treatment was to squeeze the fluid from the leaf and put same into the nose. Finally, the leaf may be boiled and drunk by affected person. Informants added that rituals and incantation could also be utilized to treat the condition. As one informant stated 'I use incantation to call out the cause of the bleeding.

All the discussants identified "effirin" (Occimum gratissimum) leaf as the material used for treating nose bleeding. However, a few (10%) of them also mentioned two other leaves namely, "Oja ikoko" (Cochlospermum planchonii) and "Imesu" (Ageratum conyzoides). The rest (90%) did not disagree but expressed that they were not aware of the use of these leaves.

#### *Ofinkin (Nasal catarrh)*

The majority (80%) of the informants believe that cold weather or ile tutu or igbona usually causes it. One informant said 'it is usually a disease of the brain that only uses the noses as the outlet though the rest did not agree with it. Many (50%) of the female discussants expressed that nasal catarrh is not a disease per se, but ailment of the elite and the educated people, but even if it occurs it usually stops after the application of the hot fermentation'. Some (40%) of the discussants attributed it to stress and inadequate rest. A few (20%) said it could be the handiwork of the enemies though some (40%) did not share this belief. The treatment according to the majority (90%) of the participants is adequate rest and hot water fermentation, some say mentholatum should be added but a few said it was not necessary.

#### *'Gbegbe" (Goiter)*

Informants referred to the central neck swelling as 'gbegbe' and termed swelling on the side as 'ese' or 'Awoka' or 'Ile dudu'. The most predominant (90%) belief held by the informants about 'gbegbe' was that the victim possesses a sign of a supernatural power. By contrast, many (50%) discussants believed it could be due to spiritual attack by the enemies to destroy the beauty of a woman. As one discussant put it 'this is the reason why it is more common in women than men.' The condition may also be caused "if a person eats from the same pot or plate or pan with a duck".

A common mode of treatment used by the informant was making scarification and incantation on the swelling. Other less commonly used method is the use of 'agbo' (herbal extract). The majority (90%) of the discussants believed in the use of scarification marks and incantation for the treatment. According to one of the discussants 'I have seen it before when incantations were made and the content of the swelling emptied out and the swelling regressed immediately'.

#### **Discussion**

This study has both substantive and methodological implications. One substantive implication is that the findings have deepened our understanding of the local perceptions of ENT-related conditions treated by traditional healers in the study area. This understanding would be helpful in history taking and overall management of the Patient in the ENT clinic.

Secondly, a common cause attributed to the ENT-related conditions identified in the study is spiritual attack. This may be a contributory factor to delay in presentation of patient at the clinic. Thirdly, many of the treatment modalities used by the



healers may actually cause more harm than benefits to patients. For example, the use of emollients and oil for treating ear-related conditions are risky and in fact can be an aetiological factor in the causation of ear infections due to burns of the skin of the external ear. It is interesting that ‘*Occimum gratissimum*’ was widely used for treating nose bleeding. Some investigators have found that this leaf contains coagulant and bacterial properties [10,11]. Further investigation is required to confirm the chemical properties of this leaf and the potential role it could play in treating epistaxis.

The methodological implication of our study is that the foundation has been laid for conducting a community-based survey to determine the prevalence of ENT-related conditions in the study area. The perceived types of ENT-related conditions identified by the healers and discussants would be used to develop culturally appropriate instruments for the survey. The data from this study will also aid interpretation of the survey data.

Herein lies the value of application of qualitative approach for the study of health conditions such as guinea worm and onchocerciasis [12]. The study has also confirmed the need for interventions to influence some of the risky practices of the healers. This will require application of health belief synthesis, a process whereby health workers collaborate with front line health workers like traditional healers by understanding local concepts and finding a meeting ground the between modern and traditional. Such an approach discourages harmful practices, reinforces healthy practices and disregards neutral ones. The result will not only aid traditional healer comprehension but will also provide them with a format for easy communication of new ideas with his community residents [12].

We acknowledge the limitations of our study. The findings may not be generalisable to the other communities in the inner core areas of Ibadan, nor to the Yoruba race.

**Table 1:** List of ENT-related conditions treated by traditional healers in Foko, Ibadan, Nigeria.

No	Condition	English translation	Perceived causes
1.	Oyun eti, eti didun	Suppurative ear	Spiritual attach, breast feeding, microbes, cold earth.
2.	Odi	Deafness	Enemies of victims, eating tabooed food during pregnancy, igbona
3.	Amurun	Epistaxis	Spiritual attach, trauma, cold earth, yellow fever, high blood pressure.
4.	Ofinkin, Osin	Nasal cattarrh	Inadequate rest and disease of the brain
5.	Belu-belu, ofun didun	Sore throat	Stepping on someone else's saliva
6.	Gbegbe, ese	Neck swelling	Spiritual attach to destroy a woman's beauty
7.	Ohun hiha	Hoarseness of voice	Excessive talking, use of alcohol, cigarette smoking, enemy

References

1. Ludman H. Complications of suppurative otitis media. In: Scott-Brown's Otolaryngology (Ed. Booth JB). 1997: 1- 29.
2. Martinson FD. Cancer of the Naso-pharynx in Nigeria. J Laryngol. Otol. 1968, 82 1119-1128.
3. Okafor BC. The chronic discharging ear in Nigeria. J. Laryngol. Otol. 1984, 98, 113-119
4. Akinwale O, Nwawolo CC and Okeowo PA. Tympanometric screening for otitis media with effusion (OME) in Nigerian children aged 2-7 years. Nig. Qt. J. Hosp. Med. 1998, 8, 44-46
5. Seely DR, Gloyd SS, Wright ADO and Norton SJ. Hearing loss prevalence and risk factors among Sierra-Leonean children. Arch. Otolaryngol. 1995, 121, 853-858
6. Ogunleye AO, Nwaorgu OGB, Lasisi OA and Ijaduola GTA Trends of sinusitis in Ibadan, Nigeria. West Afr. Med. J. 1999, 18: 298-302
7. Bhatia PL. Head and neck cancer in Plateau state of Nigeria. West Afr. Med. J. 1990, 9: 304-310.
8. National Primary Health Care Development Agency of Federal Ministry of Health, B Zonal Office, Ibadan. 1996 B Health Zone State/LGA- specific baseline data: Chapter 7. Demographic data.
9. Kruger RA. Focus groups: A practical guide for applied research. Sage publications, Newbury Park, California USA, 1988.
10. Eyetsemitan WT, Ijaduola GTA, Anyiwo CE and Thomas OO. *Occimum gratissimum* and blood coagulation. J. Res. In Ethno Med, 1986, 1: 19-26
11. Anyiwo CE, Ijaduola GTA, Uzoma KC and Eyetsemitan WT. The antibacterial effects of the essential oil of *Occimum gratissimum*. J. Res. In EthnoMed. 1986, 1, 10-12.
12. Briger WR, Ramakrishna J, Adeniyi JD and Kale O. Health education interventions to control Onchocerciasis in the context of primary health care. In: Primary Health Care: The African Experience (Ed. Carlaw RW and War WB). Third Party Publishing company, Oakland California, 1988.



# Pattern of drug use in geriatric patients undergoing surgery under general anaesthesia

D Amanor-Boadu

Department of Anaesthesia, College of Medicine, University of Ibadan, Ibadan, Nigeria

## Summary

Ninety-nine elderly patients aged between 65 and 84 years presenting for surgery have been studied as to their pattern of current drug use. Of these 47 (48%) were found to be on medication. Ten were on drugs prescribed by their physicians while 37 (37.5%) were on self-prescribed drugs. The self-prescribed drugs used were analgesics 23%, haematinics 8%, anti-inflammatory agents 6%, benzodiazepines 4%, steroids 2%, and oral hypoglycaemic agent 1%. Apart from the analgesics, patients did not know the names of the drugs they were taking. The dangers in the use of self-prescribed drugs in anaesthesia are highlighted and a plea is made for persistent effort to elicit information of drug use among the elderly presenting for general anaesthesia in order to avoid drug interactions.

**Keywords:** Geriatrics, medication, general anaesthesia, drug interactions.

## Résumé

99 adultes ages entre 65 et 84 ans se presentant pour des interventions chirurgicales ont ete etudies a propos du plan courant de prise des medicaments. De ceux-ci, 47 (48%) etaient sous medication. 10 etaient sous traitement prescrits par leur medecins alors que 37 (37,5%) prenaient des medicaments prescrits par eux – meme. 23% de ces derniers etaient analgeriques, 8% haematiniques, 6% d'agents anti – inflammatoire, 4% de benzodiazepines, 2% de steroids et 1% d'agent hypoglycemique oral. A l'exception des analgesiques, les maladies ne connaissaient pas le nom des medicaments qu'ils prenaient. Les dangers de l'usage des medicaments prescrits par soi-meme ou des tiers en anesthesie sont soulignes et un appel est fait pour un effort persistant pour elucider l'usage des medicaments chez les adultes se presentant pour une anaesthesie generale dans le but d'eviter l'interactions des medicaments.

## Introduction

Geriatric patients constitute about 2.8% of the surgical population at the University College Hospital, Ibadan (unpublished observation 1990). With improved healthcare delivery, education and enlightenment their population is expected to grow larger. There is a high surgical mortality associated with this age group and this is due to concurrent medical illnesses such as hypertension, chest diseases, diabetes mellitus and renal diseases which result from age-related decline of physiological functions of the various organs [1]. For the control of these illnesses, elderly patients often take more drugs than the younger patients [2]. In Nigeria where drugs can be purchased without a doctor's prescription, wrong drugs are often used for the illness or when the right drugs are purchased, precautions in the dosage and use of the drugs are not given or not followed. The easy accessibility to drugs allows old people to readily buy drugs for their various ailments without going to the doctor. These drugs may interact with anaesthetic agents [3] thereby exposing the patient to unnecessary risks and the anaesthetist to possible medicolegal

liabilities. This study was therefore conducted to find out the pattern of drug use in geriatric patients coming for surgery under general anaesthesia and the hazards involved.

## Patients and methods

Ninety-nine consecutive geriatric patients who presented for elective surgical procedures were studied. Each patient was visited a day before surgery. Detailed history was taken regarding present and past illnesses and treatment. The patients were also asked what medications they were taking. When the names of the drugs were unknown, the patient was asked to produce the drugs for examination. The dose and the mode of procurement of drugs were obtained. Descriptive statistics was used in the analysis of the data.

## Results

Fifty-four females and 45 males with age ranging from 65 to 84 years (mean age of 68.7 years) were studied. Forty-seven (48%) were on medications. Ten (21%) of these patients had their drugs prescribed by their physicians. Of these, four were on anti-hypertensive agents. Four were on an anti-inflammatory agent (indomethacin) and the remaining two were on oral hypoglycaemic agents (chlorpropamide and glibenclamide). Two of the hypertensive patients were also on diazepam (Table 1).

**Table 1:** Pattern of drugs used by Patients on prescribed drugs

Drugs	No of patients	% of patients on any medication
Antihypertensive	4	8.5
Antiinflammatory	4	8.5
Oral	2	4.3
Hypoglycaemic		
Total	10	21.3

\* 2 of these patients were also on sedatives

**Table 2:** Pattern of drugs used by Patientson self-prescribed drugs\*

Drugs	No of patients	% of patients on any medication
Simple analgesics	23	48.9
Haematinics	8	17
Antiinflammatory	6	12.8
Sedatives	4	8.5
Steroids	2	4.3
Oral		
hypoglycaemic	1	2.1
Antipruritic	1	2.1

\*Four of these patients were on multiple drug therapy.

Table 2 shows that 37 other patients were on drugs not prescribed by a physician. Of these, 23 were on simple analgesics (acetylsalicylic acid and acetaminophen compounds), and six on indomethacin. In addition, 8 patients were on various brands of haematinics while 4 were on diazepam. One each on chlorpropamide and chlorpheniramine for pruritus and two were



on prednisolone (one of whom was also on indomethacin). Four of the patients were on multiple drug therapy.

All the patients knew the names of the analgesics and used them for pain relief only. However one patient who was on 1200mg daily acetylsalicylic acid was discovered to be anaemic with Packed Cell Volume (PCV) 30% and was diagnosed later to have a chronic duodenal ulcer.

The patients on steroids were on 20mg and 15mg twice-daily doses of prednisolone. The name of the drug was not known to them and they replenished stock with the used up container. Some of these patients did not readily give information on drug use. One particular patient who did not give such information had a turbulent intra and postoperative period. His case report is as follows:

O.B., a sixty-five year old obese man was scheduled for laparotomy for relief of intestinal obstruction of less than 24 hours duration. Preoperatively he was well hydrated, haemodynamically stable and denied any history of drug ingestion. The haemoglobin was 16gm/dl whilst serum electrolytes were Na<sup>+</sup> 138 mmol/L, K<sup>+</sup> 4.1mmol/L, Cl<sup>-</sup> 102 mmol/L, HCO<sub>3</sub><sup>-</sup> 23 mmol/L and serum urea was 24 mg%. Pethidine (75mg) had been administered intramuscularly about 3 hours preoperatively. (25mg) pethidine and atropine 0.6mg were administered intravenously prior to induction.

At induction the pulse was 76 beats per minute of regular and good volume and the blood pressure was 140/90. A rapid induction – intubation sequence was performed with 225mg I.V. thiopentone, suxamethonium 100mg, and a size 8.5mm cuffed endotracheal Portex tube was inserted. Anaesthesia was maintained with 66% nitrous oxide and 0.5% halothane in oxygen. Muscle relaxation was achieved with 6mg of pancuronium bromide and intermittent positive pressure ventilation of the lungs was instituted.

The halothane was discontinued about 15 minutes post-induction when the blood pressure fell to 80/50 and the heart rate increased to 128 per minute. Crystalloid fluids were administered with no improvement in the blood pressure. Other signs of hypersensitivity reaction to anaesthetic drugs such as urticarial rashes, or rhonchi were absent.

A perforation was found in the small intestine and it was thought that the patient was in septicaemic shock from peritonitis, hence 500mg of methyl prednisolone were administered. The blood pressure improved to 110/80mmHg. The perforation was closed and peritoneal toileting done. The residual effects of pancuronium were reversed with neostigmine and atropine. Despite adequate fluid balance and antibiotic therapy a gradual reduction in blood pressure was again observed in the postoperative period of methyl prednisolone (500mg) was prescribed on 6 hourly basis till a stable haemodynamic system was obtained.

He was re-operated on the second postoperative day, when he suffered severe melaena, the haemoglobin fell to 6gm/dl from 14gm/dl, and he went into shock. He was rapidly resuscitated and had general anaesthesia. At laparotomy no bleeding points were found at the site of anastomosis. He was transfused with 2 more units of blood and carefully monitored postoperatively.

On the third postoperative day he complained of knee pains and asked if he could take his drugs. It was then that he was discovered to be on prednisolone 20mg twice daily for the past two years for arthritis. The drug was recommended by his friend. He was also on other analgesics which he took

irregularly. Methyl prednisolone was reduced over the following two days to 100mg 6 hourly daily and thereafter tailed off. He was operated on thrice more for wound dehiscence and incisional hernia.

## Discussion

Anaesthesia in any patient can be hazardous. This is more so if the drug the patient is taking is unknown to the anaesthetist and the drug interacts with anaesthetic agents. Geriatric patients are particularly prone to polypharmacy because with aging some medical disease such as diabetes, hypertension, respiratory and renal diseases may co-exist in the same patient.

The most common drug used by the geriatric patients in this study was analgesics. Pain in the elderly may range from headaches, non-specific aches and pains, arthritis and psychosomatic diseases. Common analgesics used were acetylsalicylic acid, acetaminophen compounds, and indomethacin. Guttman [4] also found that the most common drug taken by the elderly was analgesics.

Acetylsalicylic acid is now recommended in 300mg daily dose as prophylactic against thrombosis [5] When ingested chronically in higher doses, the drug can cause gastric irritation, bleeding and anaemia as observed in one patient in this study. Acute acetylsalicylic acid intoxication due to inadvertent overdose can also lead to metabolic acidosis in the geriatric patient. The confusional state resulting from metabolic acidosis can cause difficulty in diagnosis in the perioperative period. As observed from the study, two of these patients were on steroids for the control of arthritic pain. Exogenous steroid ingestion can lead to suppression of the hypothalamo-pituitary-adrenal axis as probably happened in the particular case reported in this study. Such a patient when presenting for surgery becomes prone to complications. Inadvertent omission of the drug by the anaesthetist will occur once the patient fails to report such drug use as it happened in this case. This led to an Addisonian crisis and other surgical complications postoperatively. Geriatric patients often have memory impairment and may genuinely forget to offer the information about their medication. It is therefore imperative that the physicians and surgeons should enquire thoroughly into drug use from the patients and their relations whenever they present for medical care.

The other patient was on indomethacin in addition to steroid for control of arthritic pain. This drug combination ingestion without supervision and without awareness of the possible complications can lead to serious haemorrhagic problems, especially in the perioperative period when the stress of surgery is superimposed on the situation. In the study conducted by Alan and Dykes [6] analgesic use was implicated in 32% of upper gastro-intestinal bleeding episodes in the elderly, and mortality was higher than in the younger patient. Perhaps it is wise to give antacid routinely to elderly patients on such drugs. Some elderly patients sometimes unknowingly ingest abnormally large doses of haematinics, in the belief that it will make them stronger. These drugs could be beneficial in the elderly patients because they seldom eat well. Since these drugs are commonly available and are heavily advertised, some patients are on supposedly different types at the same time not realising that they contain the same active ingredients with resultant possibility of overdosage. No adverse effects have been reported with the use of vitamins B and C but overdosage with the fat-soluble vitamins can result in hepatic, renal and coagulation abnormalities [7] There was however no associated complication of vitamin-haematinic compound use in this study.



Dement *et al* [8] found an increase in sleep-related problems with advancing age yet only four were discovered to be on night sedation in this study. Benzodiazepine sedatives are favoured now because of their wide therapeutic range, compared to barbiturate hypnotics. Nevertheless, diazepam is long acting especially in the elderly with depreciating hepatic function and daily use can result in cumulative effects. In the perioperative period, this can cause prolonged sedation or confusional state.

The brain utilizes mostly glucose for its metabolic functions and hypoglycaemia of short duration can cause irreversible brain damage. Vesely [9] has noted the surreptitious use of hypoglycaemic agents as one of the causes of hypoglycaemic coma in the elderly. One patient found in this study to be on chlorpropamide was not a diabetic. This drug abuse could have resulted in serious consequences if the anaesthetist had not successfully elicited the history. Even if the drug was omitted on the day of the surgery, its effects could have manifested intraoperatively due to its long duration of action.

In conclusion, some geriatric patients in this study were found to be on some self - prescribed drugs, which may complicate anaesthesia. The patients may be unwilling to confess to their use or they may simply forget. To avert serious drug interactions and perplexing complications during anaesthesia for the elderly at least two detailed and unhurried medical and drug histories should be taken. The interview should be unaccusative, suggestive, and understanding. The relations of forgetful patients should also be interviewed and if possible, all the medications should be brought to hospital for identification.

#### Acknowledgements

The secretarial assistance of Mrs. J.A. Akinleye in the Department of Anaesthesia, college of medicine, University of Ibadan is hereby acknowledged.

#### References

1. Evans T.I. The Physiological basis of Geriatric General Anaesthesia. *Anaesth. Intensive Care* 1973; 1:319-322.
2. Thompson T.L., Moran M.G., Nies A.S. Psychotropic Drug Use in the Elderly. *N. Engl. J. Med.* 1983; 308:134-138.
3. Davenport H.T. Anaesthesia for the Geriatric Patient. *Can. Anaesth. Soc. J.* 1983; 30:551-555.
4. Guttmann D. Patterns of Legal Drug Use by Older Americans. *Addict Dis.* 1977; 337-356.
5. Leurs D.A. Protective Effects of Aspirin Against Acute Myocardial Infarction and Death in Men with Unstable Angina. Results of a Veteran Administration Cooperative Study. *N. Engl. J. Med.* 1983; 309:396-403.
6. Alan R., Dykes P. A Study of Factors Influencing Mortality Rates from Gastro-intestinal Haemorrhage. *Quarterly J. of Med.* 1976; 45: No.180, 533-550.
7. Roberts H.J. Perspective on Vitamin E as Therapy. *J. Am Med. Ass.* 1981; 246:129-130
8. Dement W.C., Miles L.E., Carskadon M.A. White Paper on Sleep and Aging. *J. Am. Geriatric Soc.* 1982; 30:25-50.
9. Vesely D.L. Hypoglycaemic Coma: Don't Overlook Adrenal Crisis. *Geriatrics* 1982; 37:71-77.