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The Disease Pattern of Elderly Hospital Patients in Nigeria

SUMMARY

The Causes of Admission to hospital of 352 patients aged 60 years and above in Nigeria were examined retrospectively. The problems most frequently encountered were the cardiovascular diseases (especially hypertensive heart disease and cerebrovascular accident) which accounted for about 53% of all the admissions. Neoplasms, especially hepatoma and cancer of the prostate were next in frequency, occurring in about 12% of the admissions, followed by endocrine, nutritional and metabolic diseases (10%), respiratory diseases (8.5%), diseases of the nervous system (7%), diseases of the digestive system (5%) and renal diseases (4.5%). The median stay in hospital was 18 days.

INTRODUCTION

As a result of lack of reliable age-specific data, it has not been easy to determine the extent of ageing in many developing countries. However, the trend suggests that sooner or later, the population of many developing countries will age. The World Health Organisation in a report has predicted that developing countries will account for most of the increase in the world's elderly population by 2000(1). In fact, it is estimated that in the year 2000, 229 million people aged 65 and over will be living in developing countries, against 167 million in the industrialised world (2,3). High birth rates, reduced infant mortality and improved health care in many third world countries have prolonged life expectancy at birth, and this implies an increase in the number of the elderly people.

With the on-going demographic transition in some developing countries therefore, emphasis in public health is likely to shift in no distant future from maternal and child health to the problems of old people. But unfortunately very little information is available about the disease pattern to be expected in the elderly population, because most of the studies in disease patterns of the elderly have so far focused on developed countries. For most developing countries basic data are lacking and research into age-related diseases is now regarded as priority(4,5). There is need therefore to study the disease pattern of the elderly persons in the developing countries so as to be able to plan an effective programme for their control and prevention as well as provide adequate health services that will take care of the health problems of the elderly. Furthermore, as the economics of these countries are weak, there is need for their governments to be aware of the problems of the elderly if damaging consequences confronting elderly people are to be averted(6).

This study examines the causes of morbidity in the elderly population of Nigeria as seen in the University of Nigeria Teaching Hospital (U.N.T.H.), Enugu.

METHOD

The study was carried out at the University of Nigeria Teaching Hospital (UNTH), Enugu in Enugu State, Nigeria. The Hospital has about 600 beds and provides services both for the inhabitants of Enugu and for referred cases from other towns within and beyond Enugu State.

Case files of all first admissions aged 60 years and over to the hospital between January, 1995 and December, 1996 were retrieved and reviewed. Information extracted included patient's diagnosis, duration of hospitalisation, as well as age and sex of patients. In patients with multiple diagnosis, the primary and secondary diagnosis were analysed separately. 60 years and above was taken as elderly in this study as that was the age of retirement in Nigeria, at the time of the study.

RESULTS

Between January 1, 1995 and December 31, 1996 a total of 352 patients aged between 60 years and 85 years were admitted into the medical wards of the University of Nigeria Teaching Hospital, Enugu. This constituted 13.3% of all the admissions to the medical wards during this period. Their mean age was 68.8 years (s.d 6.2 years), male/female ratio 7:4 or 1.75:1. Overall 34% of the elderly patients were below the age of 65 years, and 9.1% were over 80 years (Table 1).

Table 2 shows the pattern of diseases among the

Table 1: Age and Sex distribution of Elderly patients

Age (Yrs)	Male	Female	All Patients (%)
60 - 64	70	50	120 (34)
65 - 69	50	30	80 (22.7)
70 - 74	48	32	80 (22.7)
75 - 79	30	10	40 (11.4)
80 +	26	6	32 (9.1)
	224	128	352 (99.9)

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Table 2: Disease pattern according to sex among the Elderly according to organ systems

Diagnosis	Male	Female	Total	(%)
A. Cardiovascular diseases:				
Hypertensive heart disease	50	38	88	(25)
Cerebrovascular disease	40	16	56	(16)
Valvular disease	4	6	10	(2.8)
Ischaemic heart disease	4	2	6	(1.7)
Congestive cardiac failure	6	6	12	(3.4)
Other heart diseases	10	4	14	(4)
Sub-Total	114	72	186	(52.8)
B. Neoplasms:				
Malign. of digestive organ	2	2	4	(1.1)
Hepatoma	10	2	12	(3.4)
Malign. of the lump. and haemop. systems	4	-	4	(1.1)
Ca. prostate	12	-	12	(3.4)
Benign prost. hypertrophy	2	-	2	(0.6)
Genitourinary organs	-	2	2	(0.6)
Bone, skin and breast	-	4	4	(1.1)
Lip and oral cavity	-	2	2	(0.6)
Sub-Total	30	12	42	(11.9)
C. Endocrine, nutritional & metabolic diseases:				
Diabetes mellitus	24	10	34	(9.6)
Thyroid glands	-	2	2	(0.6)
Sub-Total	24	12	36	(10.2)
D. Respiratory diseases:				
Pneumonia	6	8	14	(4)
Chest, obs. pulm. disease	10	2	12	(3.4)
Acute respiratory infection	4	-	4	(1.1)
Sub-Total	20	10	30	(8.5)
E. Nervous system diseases:				
Parkinsonism	6	4	10	(2.8)
Guillain-Barre syndrome	2	-	2	(0.6)
Epilepsia	10	-	10	(2.8)
Spinal cord quadriplegia	-	2	2	(0.6)
Sub-Total	18	6	24	(6.8)
F. Digestive system diseases				
Liver cirrhosis	6	-	6	(1.7)
Peptic ulcer & Other stomach/duodenal diseases	-	2	2	(0.6)
Diseases of the intestine	-	2	2	(0.6)
Non-infective gastro enteritis and colitis	-	2	2	(0.6)
Typhoid	2	-	2	(0.6)
Hepatitis	4	-	4	(1.1)
Su-Total	12	6	18	(5.1)
G. Renal diseases:				
Chronic renal failure	8	4	12	(3.4)
Urinary tract infection	4	-	4	(2.1)
Sub-Total	12	4	16	(4.5)
Grand total	230	122	352	(100%)

Table 3: Pattern of Secondary diagnoses in elderly patients

Diagnosis	Male	Female	Total	(%)
Senile dementia	2	-	2	(0.6)
Cerebrovascular disease	8	2	10	(2.8)
Cancer of the prostate	2	-	2	(0.6)
Hypertensive heart disease	6	4	10	(2.8)
Congestive Cardiac failure	6	4	10	(2.8)
pneumonia	2	2	4	(1.1)
Liver cirrhosis	2	-	2	(0.6)
Arthritis	2	2	4	(1.1)
Benign prostatic hypertrophy	2	-	2	(0.6)
Chronic renal failure	4	4	8	(2.3)
Parkinsonism	2	2	4	(1.1)
Diabetes mellitus	-	2	2	(0.6)
Urinary tract infection	2	2	4	(1.1)
Spondylosis	6	-	6	(1.7)
Total	46	24	70	(19.8%)

elderly according to organ systems. Cardiovascular diseases accounted for 186 or 52.8% of all admissions, with remarkably high proportions of hypertensive heart disease and cerebrovascular accident accounted for 47.3% and 30.1% respectively of the cardiovascular diseases.

Neoplasms accounted for 42 admissions (11.9%), followed by endocrine, nutritional and metabolic diseases with 36 admissions (10.2%), respiratory diseases 30 (8.5%) diseases of the nervous system 24 (6.8%) diseases of the digestive system 18 (5.1%) and renal diseases 16 (4.5%). There were no significant differences in the proportions of males and females that suffered from the diseases of the various organ systems encountered.

Infections seen in the elderly included pneumonia encountered in 4% of the patients, urinary tract infection in 2.1%, acute respiratory infection and hepatitis in 1.1% and typhoid in 0.6%.

Secondary diagnoses are summarized in Table 3. About 70 (19.8%) of the people aged 60 years and over presented with more than one diagnosis. Again diseases of the cardiovascular system were most frequent, followed by renal failure and spondylosis.

The mean duration of hospitalization for the elderly patients was 24 days and the median stay in hospital was 18 days for all the diseases.

DISCUSSION

Although the Alma-Ata declaration, in promoting Health for all by the year 2000 did not exclude adults, the strategic implementation of the declaration emphasized maternal and child health and infectious diseases almost exclusively (7). Consequently in developing countries health care is mainly focused on women, children and young adults.

The fact however that 13.3% of the admissions in this study was of the elderly shows that the diseases of this group in the community deserve considerable attention. This finding agrees with the studies in Riyadh(8) and Rwanda(9), where the elderly persons aged sixty and over accounted for 23.2% and 13.2% respectively of all admissions to the medical wards.

It is likely, however, that this finding is an under estimation of the real frequency of problems encountered in elderly people since only a fraction of the elderly patients are admitted in the Teaching Hospital.

A higher proportion of male patients found in this study agrees with similar studies in developing countries(10,11) where women, for cultural and socio-economic reasons, seem to come less readily to the hospitals.

Cardiovascular diseases accounted for more than half of all admissions of the elderly to the medical wards in this study. It is remarkable that the causes of admission among the elderly found in this study is somehow similar to situation in the industrialised countries of North America and Europe(12).

The high incidence of hypertensive heart disease agrees with the findings from other parts of Africa(8,13). The high proportion of patients with cerebrovascular disease and diabetes mellitus in the patients is also striking.

Neoplasms, especially hepatoma and cancer of the prostate, are next in frequency to cardiovascular diseases, occurring in almost 12 percent of the admissions. The high incidence of hepato-cellular cancer confirms the observations that it is the most common cancer in sub-saharan Africa(14,15).

Cancer of the prostate was also seen in several patients, but its prevalence must be higher than reported here, since many patients with this condition may have been hospitalised and treated in the Surgical Department of the Hospital.

Others have also described a high prevalence of latent prostatic cancer in Central Africa, similar to that of other geographical regions(16).

For the infections pneumonia, as expected was more frequent than other infections. Tuberculosis, although common among the elderly, was not encountered in this study because tuberculosis patients are admitted and treated in a special (chest) unit of the hospital. Other infectious and parasitic diseases, in general, are mild in the elderly due to immunity, and so are not a common finding in our elderly hospital patients.

Multiple morbidity is characteristic of the elderly and it is estimated that three or more chronic diseases are found in more than 50 percent of people aged 80 years and over(17). In this study about 20% of the people aged 60 years and over presented with more than one diagnosis.

The median length of stay in hospital in this study is longer than that of other studies on the elderly(8,18) but similar to the Rwandan study(9).

It is to be noted however that illness treated in hos-

pitals is a highly selected fraction of illnesses occurring in the community and can therefore only but show part of the total morbidity picture.

But since there is serious lack of basic data from developing countries, the morbidity information from hospital-based data can be of considerable value in studying disease patterns in such places. Finally rather than rely on data originating from industrialised countries, such studies can serve as a better and more useful guide for realistic health planning by developing countries.

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ERRATA

- 1. Nigerian Medical Practitioner, Vol. 37, No 5/6 1999 Pages 85-87
 - a. Title to read. "A hospital Survey of dermatoses and developmental defects in the Nigerian Neonates"
 - b. Authors to read:
 - O. Onayemi*
 - E. A. Adejuyigbe
 - O. A. Jegede
 - O. Oyelami
 - S. E. A. Torimiro
 - *for Correspondence
 - c. Methods: Paragraph 1, line 6 - "on the" repeated
 - d. Discussion:
 - i. Paragraph 1, line 2 - "The first" repeated
 - ii. Paragraph 1, line 22 - "Mother" to read "mothers"
 - iii. Paragraph 3, line 12 - insert "account" after "could"
 - iv. Paragraph 6, line 1 - Insert "near" before "born"

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Nigerian Medical Practitioner

ERRATA

Authors name corrected from "J. I. Aligbe" to "J. U. Aligbe" and "C. E. Ohanak" to "C. A. Ohanaka"
of article titled *The pattern of male breast lesions*. Published in May/June 1999 Edition

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Surgical Suction Drainage Using Plastic Infusion Bottle

- A Technique improvised for developing Countries⁺

SUMMARY

Closed suction drainage is useful in preventing post-operative haematoma or seroma especially when skin flaps have been raised. The ready-made complete kits for this purpose are often too expensive for wide use in developing countries. An innovative simple technique is therefore described as a cheap and effective way of providing closed suction drainage using the ordinary plastic infusion bottle and giving-set.

The cost of the ready-made kit, such as Redivac^(R), is about a hundred-fold of the cost of the materials for the improvised drain. The device also has the advantage that negative pressure can be re-created manually without the use of a suction machine. The possible advantages of the device over the other improvised drains are discussed. Precautions to prevent complications are also highlighted. The technique is presented for wide usage in a setting where resources are scarce

KEYWORDS : Suction drain, surgical drainage, improvised drain, plastic infusion bottles

INTRODUCTION

From the Hippocratic era, any invention for surgical drainage has remained an exciting but also controversial issue. However, while therapeutic drains are accepted as a necessity, prophylactic drains are in question. Robinson(1) has stated that the "Surgeon's dilemma is when to drain: none will doubt the necessity to drain undesirable collections, none can dogmatically say yea or nay to prophylactic drainage and we are left with Tait's axiom: 'when in doubt drain' ". Nonetheless, when there is a definite need to drain, closed suction drainage is known to be the most effective system of drainage, especially of clean wounds in which skin flaps are made(2). Since 1952, when Raffl(3) developed a method of continuous suction drain employing an external source of vacuum connected to the drainage tube, various refinements have taken place and these days, suction drains are now supplied as complete kits (Redivac^(R), Portovac^(R) etc). Unfortunately, financial constraints limit the availability of these elegant kits in developing countries and as such, various forms of improvisation had been designed to overcome this problem(2,4,5). This paper describes yet another invention of a cheap and readily available suction drain using the ordinary disposable plastic infusion bottle and the infusion giving-set.

MATERIALS AND METHODS

The materials for the drain consist of the ordinary plastic infusion bottle and the intravenous infusion giving-set commonly used at the Lagos University Teaching

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Hospital. The contents of the infusion bottle is emptied either by administering the fluid into the patient, if desired, or by discarding it. The opening through which the bottle is emptied should however not be bigger than the size of the pointed end (bottle end) of the infusion giving-set.

Figure 1 shows the emptied and collapsed infusion bottle with its giving set (red-arrow) shown besides the popular ready-made kit (Redivac^(R)).

The needle and threaded rubber end of the giving-set are removed leaving only the plastic tubing. Side holes are made on the plastic tubing using scissors to cut the holes after making an almost 180° bend of the tube (Figure 2). The holes made are each about 0.2cm in diameter and these are made 1cm apart, asymmetrically over a length of tubing, between 10 - 25cm, depending on the size of wound to be drained.

Using size 11 blade (or the tip of any surgical blade), a stab wound, slightly less in diameter than the diameter of the tubing, is made outside the main incision line. Through this stab wound, the tubing is brought into the wound with an artery forceps.

The emptied plastic infusion bottle is then systematically squeezed from the bottom end so as to collapse it completely as shown in Figure 1. With the infusion giving set closed with the wheel clamp, the pointed end of the infusion giving-set is then inserted into the squeezed plastic bottle through the puncture site used for emptying the bottle. The wound is closed and the plastic tubing is secured with a stitch before the wheel clamp is opened. Suction commences as soon as the wheel clamp is opened, and blood or other fluid collection can be seen running into the tubing and gradually into the plastic infusion bottle (Figure 3).

The collapsed plastic bottle is placed at a level below the level of the patients bed as the suction is further helped by gravity. The air chamber may be pumped periodically as this helps to dislodge clots.