



Prescription patterns and utilisation of antihypertensive drugs in private practice in Umtata

To the Editor: Hypertension is the commonest chronic disease occurring among adult South Africans.^{1,2} Rational prescribing and the safe use of drugs are important in the management of hypertensive patients since they are on chronic medication.³ The choice of antihypertensive agent(s) is equally important because drug costs contribute up to 90% of the treatment costs for hypertension.⁴ There are apparently no reports on the management of hypertension in the Eastern Cape.^{1,2,5,6} We therefore analysed prescriptions for antihypertensive drugs in order to establish the drug utilisation patterns and the quality of prescribing in the private health sector, and the extent to which South African hypertension treatment guidelines^{7,8} are followed in Umtata.

We did a retrospective analysis of all prescriptions for antihypertensives between 1 January and 31 December 2000 at Umtata Pharmacy, the largest community pharmacy in Umtata. The pharmacy keeps all prescriptions served, hence we had access to all prescriptions for the whole year. We used a purpose-designed form to note the number of drugs, name(s) of drug(s) (brand/generic), form of payment, and whether or not the following were stated: diagnosis, dose, dosage form, duration of treatment and dosing interval.

There were 411 prescriptions for antihypertensives during the year 2000. Of these, 222 (54%) were paid for by medical aid, 187 (45.5%) by cash, while form of payment was not stated for 2 prescriptions (0.5%). The overall average number of drugs per prescription was 2.39 (range 1 - 8), 2.63 for medical aid patients (range 1 - 8), and 2.11 for cash-paying patients (range 1 - 7); the form of payment significantly influenced the number of drugs per prescription ($p < 0.001$). In 9.9% of the prescriptions 5 or more drugs were included. In 88.3% of prescriptions only brand drug names were used, compared

with 5.4% that used generic names exclusively. Most prescriptions were incomplete, for instance the diagnosis was not stated in 84.9%, in 21.7% the duration of treatment was not fully stated, and in 22.9% the dose was not properly stated.

Table I shows the distribution of antihypertensive drugs by class. Single antihypertensive drug prescriptions constituted 53.8%, 2 agents 39.1%, 3 agents 6.1% and 4 antihypertensive agents 1% of the total. Fixed drug combinations constituted only 8.5% of the prescriptions. Sixty-seven per cent of the combinations included at least 1 diuretic.

Table I. Distribution of prescribed antihypertensive agents by group

Group	% of total*
Diuretics	38.5
ACE inhibitors	23.5
Ca-channel blockers	20.4
Beta-blockers	10.0
Centrally acting	2.1
Angiotensin receptor blockers	1.9
Combined alpha/beta-blockers	1.7
Alpha-blockers	1.3
Vasodilators	0.5
Reserpine	0.2

* Expressed as a percentage of all prescribed agents.
ACE = angiotensin converting enzyme; Ca = calcium.

Table II. Comparative retail costs for some antihypertensive agents

Drug	Cost of 1 month's supply (Rand)
Atenolol (100 mg daily)	
Atenolol (generic)	19.84
Tenormin	249.10
Ten-Bloka	90.12
Captopril (25 mg t.d.s)	
Captopril (generic)	109.10
Capoten	313.84
Captomax	132.21
Indapamide (2.5 mg daily)	
Indapamide (generic)	70.99
Dapamax	79.61
Indalix	79.50
Natrilix	134.43
Enalapril (10 mg daily)	
Enalapril (generic)	131.25
Renitec	164.16
Nifedipine (10 mg t.d.s.)	
Nifedipine (generic)	179.32
Vascard	179.46
Cardilat	181.12
Adalat	477.20
Perindopril (4 mg daily)	
Perindopril (generic)	122.76
Coversyl	204.62
Hydrochlorothiazide (25 mg daily)	
Hydrochlorothiazide (generic)	2.05
Dichlotride	39.20
Urirex	4.90
Propranolol (40 mg t.d.s)	
Propranolol (generic)	29.07
Pur-Bloka	81.90
Inderal	340.28
Furosemide (20 mg daily)	
Furosemide (generic)	34.50
Lasix	89.74
Puresis	29.55



The most frequently prescribed diuretics were indapamide (45.1%), furosemide (18.9%), hydrochlorothiazide (18.4%) and amiloride (12.7%); 29.9% of diuretics were prescribed as monotherapy. Of the angiotensin converting enzyme (ACE) inhibitors 31.5% were monotherapy, compared with 9.5% of the calcium-channel blockers and 54% of the beta-blockers. Among -blockers, atenolol accounted for 49.2%, propranolol 44.4%, and bisoprolol 6.4%; 174 prescriptions (42.3%) included non-antihypertensive drugs.

Table II compares the retail costs of generic and brand name products for some of the widely used antihypertensives.

The low percentage of generic prescribing, infrequent use of fixed drug combinations, high number of incomplete prescriptions, tendency to prescribe more drugs for medical aid patients relative to those paying cash, and inconsistency of our findings with available guidelines are troubling. For instance, although diuretics were the commonest prescribed group, indapamide, not hydrochlorothiazide, was the most popular, and more than half the -blockers were prescribed as monotherapy. South African and international guidelines, on the other hand, call for the use of a thiazide diuretic, followed by -blocker plus thiazide, but not -blocker alone.⁷⁻¹⁰ The guidelines discourage the use of propranolol in favour of atenolol,⁸ yet we found that the two were prescribed equally.

Most prescriptions had no diagnosis, which limits the evaluation of appropriateness of drug use.¹¹ The greater prescription of brand name drugs relative to the generics, with attendant higher costs, may result in irregular supply of drugs and poor control of blood pressure.^{12,13} The polypharmacy noted (10% with five or more items) raises the possibility of irrational prescribing with higher likelihood of non-compliance.^{14,15}

Prescribers need to write complete prescriptions to ensure proper and safe use of drugs. These concerns should be

addressed through CPD activities, which should incorporate issues of treatment guidelines for common conditions such as hypertension.

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Superficial siderosis — case report and review

To the Editor: Superficial siderosis (SS) is a rare but distinct syndrome afflicting the central nervous system (CNS) characterised by sensorineural deafness (SND), cerebellar ataxia, dementia and myelopathy and caused by chronic bleeding into the subarachnoid space.^{1,4} The source of this bleeding is identified in only half of cases described. Pathologically there is deposition of haemosiderin in those parts of the CNS lying in close proximity to the cerebrospinal fluid (CSF), including the subpial and subependymal margins.¹ The haemosiderin deposition causes gliosis, neuronal loss and demyelination.¹ The peripheral nervous system is not affected.¹

Hamill first described this condition in 1908, and in 1995, 87

cases of superficial siderosis were reported in the literature worldwide.¹ It occurs more commonly in males (male/female 3:1) and has been described in patients with an age range of 14 - 77 years.¹ No specific racial predilection has been noted.

We describe here a 58-year-old South African woman with SS in whom no cause has been identified. As far as we are aware there is no report of a case(s) of SS from South Africa.

Case presentation

A 58-year-old woman presented with a history of deafness and gait disturbance. The deafness had started in the left ear 6 years before presentation, and within 6 months of onset it