Vertigo in First and Third World Patients

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In Karachi (Pakistan) during 1982-83 a total number of 104 patients were assessed and this group was compared and contrasted with another group of Patients in Kirkcaldy. More males presented in Karachi (66) and more females in Kirkcaldy (65). Karachi patients were younger in age; older patients were more frequent in Kirkcald;(Caloric Test was positive in 70 patients in Karachi but only in 25 patients in Kirkcaldy. The commonest diagnosis in Karachi was Meniere's disease (52%) tiS compared to cervical vertigo in Kirkcaldy (25%). Benign Positional vertigo is less common in' Karachi (4%). There are no cases of Vertigo due to Streptomycin toxicity in Kirkcaldy compared to 6 cases in Karachi. The number of Acoustic Neuromas and Vestibular Neuronitis was similar at both sites. More cases were undiagnosed in Kirkcaldy (33%) as compared to Karachi (14%) and here psychosomatic factors may be playing a part. The follow up was 98% in Kirkcaldy as compared to 40% in Karachi. This may be due to facilities in management and rehabilitation. Grants apparatus for Caloric testing does not work in summer when the temperature is high. It should have a cooling mechanism for hot countries.
Key words: Vertigo, first world, third world

While working in Karachi we published an assessment[1] of 104 Patients who consecutively presented in general ENT outpatients. When moved to Kirkcaldy in 1996 another study was done of the same pathology. The economic & social conditions and availability of health services between first and third world vary a lot, thus there are a number of similarities as well as differences in between these groups of patients. This compares and contrasts these findings.

Patients and methods:
Patients presenting consecutively with vertigo were examined personally by myself in Karachi. In Kirkcaldy patients were examined by three consultants and two associates after a audit form has been discussed and adopted for recording findings in a dizzy patient. It was made sure to spend some time with each patient, no patient had less than two consultation but many had more than two consultations. Patients were encouraged to describe their symptoms, difficulties and handicaps in their own words. Information was supplemented by direct questioning. Examination included ENT, cranial nerves, .search for spontaneous nystagmus, Romberg's test, and examination of Neck. Other may have additional detailed' examination of Sensory system, Cerebellar system, blood pressure etc. Audiological examination included Pure tone Audiogram at both places while others at Kirkcaldy may have had impedance audiometry as well. Other audiological tests like Bekesy Audiometry, tone decay, SISI, loudness balance were used to be done in Karachi in 1983-84 but by 1996 we have MRI which was the routine replacing the Audiological tests mentioned above. Caloric[2] and ENG[3] examination were performed on all patients at both places. This was combined by positional tests, search for spontaneous nystagmus. The rotation tests were done in some patients in Karachi as the facility was not available in Kirkcaldy.

The radiological examinations X-ray neck, IAM, Tomograms were all replaced in Kirkcald by MRI scan.

Results:
104 patients were assessed in Karachi and 105 in Kirkcaldy. Male to Female ratio was 66:38 in Karachi and 40:65 in Kirkcaldy. Their ages are given in Table 1.

Table 1

Age	Karachi	Kirkcaldy
10-20	2	-
21-30	14	8
31-40	19	17
41 – 50	32	22
51 – 60	30	25
61-70	7	25
71 – 80	-	7
81 – 90	-	1

There were 117 normal pure tone audiograms in Karachi and 120 in Kirkcaldy, while 91 audiograms showed hearing loss in Karachi and 90 in Kirkcaldy. 20% of Meniere's disease in Karachi and 15% in Kirkcaldy had normal audiograms.

Canal paresis was present in 40 patients in Karachi and in 17 patients in Kirkcaldy. Directional preponderance was present in 25 and. 8 patients respectively. Final diagnosis in patients is seen in table 2.

In follow up 15 patients were better in Karachi, and 24 in Kirkcaldy, improvement was noticed in 16 patients in Karachi and 23 in Kirkcaldy. Ten and twelve patients were the same in follow up at Karachi and Kirkcaldy respectively. Of the patients who did not return for follow up 63 were in Karachi. and two in Kirkcaldy. In addition 44 patients at Kirkcaldy did not return after the final diagnosis was explained to them.

Table 2

Diagnosis	Karachi	Kirkcaldy
Cervical Vertigo	-	27
Meniere's	54	13
Benign Positional	5	15
Vestibular Neuronitis	3	5
Streptomycin Toxicity	6	-
Acoustic Neuroma	3	2
Multiple Sclerosis	1	2
Vertebrobasilar	9	
Psychosomatic	7	-
Serous Otitis Media	1	-
Cholesteatoma	-	2
Age related	-	2
Perilymph leak	-	1
TMJ	-	1
No diagnosis	15	35

Discussion:

Vertigo indicates a sensation of false movement (generally described like a rotation) but sometimes the patient can describe it like a sensation of tilt[4]. Vertigo is a result of a mismatch between 3 sensory systems: the vestibular, the visual, and the somatosensory systems[5,6].

Vertigo and dizziness are very common symptoms in the general population[7]. More female patients were seen in Kirkcaldy reflecting the easy access to health care facilities, while Jack of education in females and difficult to access health facility may be reflected in third world country.

More people are living longer in first world thus more older patients were seen in Kirkcaldy. While prevalence of younger people in third world is reflected in Karachi. Similar pattern in Pure tone audiogram were seen at both places as far as normal and decreased threshold were concerned. Meniere's disease is more common in Karachi, while Cervical Vertigo in Kirkcaldy, possibly due to younger population being free of Cervical disease.

This is also reflected in absence of dizziness due to advanced age in Karachi while we had two in Kirkcaldy. Benign positional vertigo was more frequent in Kirkcaldy. Acoustic Neuroma, Vestibular Neuronitis and Multiple sclerosis has same frequency at both sites. Improvement in the condition (better + improved) was higher in Kirkcaldy (44%) as compared to Karachi. This reflects the help received due to facilities like counseling, physiotherapy and other support facilities here. Even after repeated assessments it is not possible to diagnose a 33% of patients in Kirkcaldy, this figure was less for Karachi (14%). This appears to be due to anxiety people have for their well being and health here, while ignorance is a bliss in Third world. The role of G. P. is so important in managing a condition like. Vertigo, 44 Patients in Kirkcaldy never bothered to return once their assessment was explained to Patients and their General practitioners. Follow up was dismal in Karachi as 63 patients were lost. Caloric[2] test still enjoys the advantage of being simple, quick and helpful. It contributes towards understanding the site of lesion, helps in excluding non otological causes and establishes side in otological causes. ENG[3] is time consuming, tedious, cannot be relied solely, it may be satisfying to some. patients, helps in recording nystagmus, its speed and frequency, on the whole can be said to be supportive in diagnosis however Rotation tests are diagnostic in Streptomycin toxicity. Grants testing apparatus. used is stimulating labyrinth by hot water to 37 and 44°C, it does not work in hot climate where temperature is already above 30°C. It needs to have Cooling system installed for hot countries.

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