

## **ABSTRACT**

### **Role of preoperative B-scan to detect posterior segment pathologies in eyes with age related mature cataract**

Muhammad Hanif MCPS, FCPS, Muhammad Sajid Munir FCPS, Sumaira Altaf FCPS,  
Mehmood Ali MBBS

**Purpose:** To determine the role of B-scan ultrasonography (USG) in pre operative assessment of eyes with age-related mature cataract by documenting the frequency and nature of posterior segment intra-ocular pathologies detected by it.

**Design of study:** A hospital based descriptive observational study

**Participants:** Two hundred nine (209) eyes with age related mature cataract of the patients presenting at the outpatient department of Al-Shifa Trust Eye Hospital, Rawalpindi from May to August 2003

**Methods:** A detailed ocular and medical history was taken keeping in view the inclusion and exclusion criteria. Eyes of these patients were divided into four groups on the basis of their age. All patients underwent a comprehensive ocular evaluation including visual acuity assessment, slit-lamp examination, pupil reactions and applanation tonometry. B-Scan USG of these patients was performed at both high (58-61db) and low (42-44db) instrument sensitivity settings. By compiling data obtained by these various scanning approaches, a three dimensional concept of the lesion was developed and its topography adequately documented. SPSS software (Ver.10.0) was used for statistical analysis of results.

**Results:** It was observed that out of 209 eyes considered for simple mature cataract, USG revealed that 29 (13.87%) of them also had some other ultrasonically detectable posterior segment pathologies. 10 (4.78%) eyes out of 209 had vitreous haemorrhage (VH), 9 eyes (4.30%) had PVD, 3 eyes (1.43% ) had asteroid hyalosis, 4 eyes (1.91%) had membranes in anterior and mid-vitreous, 2 eyes (0.96%) had chorioretinal layer thickening while one eye (0.48%) had optic disc edema.

**Conclusion:** Pre operative B-Scan ultrasonography of cataract patients, when posterior segment examination is not possible by conventional methods, helps in diagnosis of additional posterior segment pathologies. Knowledge of these hidden posterior segment pathologies will then help the surgeon in explaining prognosis and expected outcome of surgery to patients. Surgeons can modify their plan of surgery and can also take measures to combat various predictable complications. In addition many legal and technical problems can also be avoided. Al-Shifa Journal of Ophthalmology 2007; 3(2): 61-66 © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.