
G. Boulanger, I. Orignac, M. Weber, Nantes University Hospital (FRANCE)

PURPOSE:
To study the impact of the phakoemulsification on demographic evolution of acute primary angle closure.

MATERIAL AND METHODS:
• Retrospective study
• Inclusion criteria:
  - Acute primary angle closure (APAC) or acute angle closure (AAC) due to cataract
  - Treated in Nantes University Hospital between 2001-2003 and 2008-2010.
• Exclusion criteria: AAC due to uveitis, traumatism, tumor or neovascular glaucoma.
• Comparison of demographic data (number of cases, age, sex), clinical data (biometric values, presence or absence of iris plateau or cataract) and therapeutic data between 2001-2003 and 2008-2010.

RESULTS:

• Global significant decrease of 47% among cases of AAC observed in 7 years, (p=0.0005, exact test of Fisher)

• Decrease of cases of AAC due to cataract: 82% in 2001-2003 versus 50% in 2008-2010, (p=0,017, test of Khi-deux)

DISCUSSION:
Our study confirms a significant decrease of AAC due to cataract, more particularly among the 70-80-year-old people.

Did the constant increase of cataract surgery in elderly people play a role in the recent decrease of acute angle closure cases?

Yes, according to literature:
• Epidemiologic arguments: marked reduction of AAC and high increase of cataract surgery in UK in the past 20 years (Day and Foster, 2011)
• Anatomical and clinical arguments:
  - Anatomical changes after phakoemulsification in eyes with occludable angles: cataract surgery led to anterior chamber deepening, angle opening, and lower intraocular pressure (Shin, 2010)
  - UBM studies confirm these anatomical changes (Pereira 2003, Kurimoto 1997)

CONCLUSION:
The constant increase of cataract surgery in elderly people has probably played a preventive role in AAC cases.
Nowadays AAC cases are less due to cataract than to acute primary angle closure or iris plateau.
The prevention of AAC by treating occludable angles among people at risk is determinant.

REFERENCES:
Day AC, Foster PJ. Increases in rates of both laser peripheral iridotomy and phacoemulsification have accompanied a fall in acute angle closure rates in the UK. Br J Ophthalmol. 2011;95(9):1339-1340.