Parotid Swelling in Patients of Eclampsia : Report of Five Cases.

Richa V. Singh, *Anil P.* Sakhare, *Parsad L.* Bhanap, *Arun R.* Mahale

Department of Obstetrics and Gynaecology, Govt. Medical College and Shri Guru Govind Singhji Memorial Hospital, Nanded – 431 601.

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Introduction

Eclampsia is one of the most serious complication during pregnancy and is associated with a very high maternal mortality and morbidity in the developing countries. For these reasons, only major complications and findings associated with serious consequences are reported in the literature. Herewith we report an observation which has not been encountered in the literature but has been repeatedly noted in our patients of eclampsia. We also postulate the likely reasons for its occurrence.

Clinical Report

During the period from April 1999 to January 2000, in 76 cases of eclampsia commonly reported complications were aspiration pneumonia (five cases), blurring of vision and temporary blindness (two cases), febrile morbidity (six cases), laryngeal edema (one case), psychosis (two cases) but uterine haemorrhage (ten cases). But an uncommon finding that perplexed us was parotid swelling in five of them. The swellings in the neck region were continuous with the swelling in the parotid region. The ear lobule was elevated, the swellings were soft in consistency, unilateral in three cases and bilateral in two cases and were nonfluctuant. There was an increase in the local temperature and tenderness was present. Opinion of ENT surgeon was sought, who confirmed that the swellings were due to acute parotitis. These patients received magnesium sulfate regimen for control of seizures and nifedipine for control of blood pressure. The swelling subsequently resolved with conservative line of management which consisted of frequent mouth washes with warm saline and maintaining oral hygiene. They did not appear to have any serious consequences but generated interest in us to review the literature.

Discussion

Acute parotitis as a complication of eclampsia has not been described in standard textbooks of obstetrics.

Acute parotitis is a known complication following major surgical operations, during debilitating illnesses such as typhoid fever and cholera and following radiotherapy[1]. Poor oral hygine, dryness of mouth are other causes of parotitis. Our patients had received nifedipine for control of hypertension.

According to Turner[2] and Dehpour et al[3], there is a specific mechanism by which salivary glands bring about secretion of saliva. Acinar cells, under the influence of acetyl choline, with intracellular G proteins and phospholipase C form phosphatidyl inositol 4, 5-IP3 and diacylglycerol, which stimulates calcium receptors in the cell causing a movement of calcium from endoplasmic reticulum into the cytoplasm. This action causes movement of K + and Cl – ions, through channels in the plasma membrane and thus salivary fluid is formed in the lumen of the ducts.

Therefore, it can be hypothesised that acute parotitis in cases of eclampsia may be because of following reasons – i) dryness of mouth is a common association in these cases because of comatose-semicomatose state, restriction on intravenous fluid and hot climatic conditions ii) poor oral hygiene because of restriction on oral fluids, dryness of mouth and possibly because of tongue bite iii) the possible effect of calcium channel blocker (nifedipine), which by inhibiting movement of calcium from endoplasmic reticulum to cytoplasm prevent formation of K + and Cl – ions in the ductules and thereby inhibiting salivary secretions. Reduced salivary secretions may bring about dryness of mouth and possible parotitis.

Regular mouthwashes, moistening of buccal cavity and use of sialagogue may be suggested to prevent dryness of mouth and resulting acute parotitis.

References

1) Beward G.R. The salivary glands. In: Mann C.V, Russell R.C.G., Williams N.S. eds. Bailey and Love's short practice of urgery. 22nd edition, *ELBS edition, 1996, pg. 472.*

2) Turner R J. Mechanism of fluid secretion by salivary glands. In Daniel Malamud, Lawrence Talak eds. Saliva as a diagnostic fluid. *Annals New York Academy Science 1993; 694: 24-35.*

3) Dehpour AR, Ghafourifar P, Massoudis et al. On the relation of calcium channel blockers to rat parotid and submandibular glands function in vivo. *J Gen Pharmacol 1995; 26:619-22.*

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Correspondence :
A. R Mahale
Depatment of Obstetrics and Gynecology, Govt. Medical College, and Shri Guru Govind Singhji Memorial Hospital, Nanded - 431 601.