[***Indian Medcical Journal,*** (1982): (76), 6, 75]

Conservative Management of Salivary Calculi with Cystone

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INTRODUCTION

Calculi may form in all salivary glands or their ducts, but about 70 to 80 per cent are mostly found in the submaxillary gland or duct. The parotid and sublingual glands accounts for 15 to 20 per cent. They are found more frequently in the ducts than in glands.

Salivary Calculi are composed largely of phosphate and carbonate of Calcium. The lesser constituents are calcium fluoride, Sodium and Calcium Chloride and a small amount of Sulphocyanide of potassium, animal matter and bacteria form a small proportion. The salts of saliva are deposited in the duct or gland. The causative factor are believed to be (1) Inflammation of the mucous membrane with an increased precipitation of salts, (2) The deposition of salts around bacterial masses or particles of inorganic matter.

Salivary Calculi give rise to symptoms, when they grow sufficiently large to block the duct or from infection induced by stasis of the gland and duct. When the salivary duct becomes blocked, the affected gland becomes swollen and tender, more especially after eating. Partial dryness of the mouth is a common complaint. Richness in mucin and a high salivary pH are believed to be conducive to formation of salivary calculi and tartar deposition.

Successful oral treatment with Cystone for urolithiasis has evoked a great deal of interest among medical practitioners and researchers, since the publication of earlier reports by Benkar Y.G. (1954) and Dave H.D. (1955) and later on by Inder Mohan Tiku *et al* (1974), Upadhyay *et al* (1976), Nagpal *et al* (1977), Pramod Kumar (1979) and Muthusamy, *et al.* (1980), Vakil J.N. (1955) and Harkat R.R. (1974) treated cases of Salivary Calculi successfully with Cystone tablets (Himalaya Drug Co.,). These results have prompted me to go in for conservative management for Salivary Calculi by oral Cystone therapy.

MATERIAL AND METHODS

Four cases treated with oral Cystone therapy with very remarkable and gratifying results are presented here.

1. A male, a student aged 20 years, was admitted for treatment of a swelling in the submandibular region with excruciating pain during meals. Typical signs and symptoms of Salivary Calculi were present in the left Wharton's duct. He was treated with Cystone tablets 2 t.i.d. for 6 days along with antibiotics. On the seventh day, the patient reported complete relief of pain and swelling. He showed me the calculus which had been expelled.

2. A housewife aged 50 years complained of swelling in the right submaxillary region for last two years. The swelling used to appear during meals and subside later on. On detailed examination, purulent discharge was noticed from under the tongue. She was put on Cystone tablets 2 t.i.d. for one week. On the eighth day, a small stone was passed out and the swelling and purulent discharge subsided gradually.

3. A farmer aged 35 years complained of swelling in the left submaxillary region and pain, particularly after food. The opening of the submaxillary duct appeared to be congested and

ulcerated. The X-ray showed obstruction of the left submaxillary duct. He was put on Cystone tablets for 10 days. On the 11th day he passed out a stone larger than a grain of rice.

4. A male teacher 40 years old reported with swelling in the right parotid region for 8 days. A purulent discharge was noticed near the orifice of right Stensen's duct and a smooth, round calculus about the size of a wheat grain was palpated bimanually at the anterior edge of the right parotid duct. The diagnosis of salivary calculus in the right Stensen's duct was confirmed. He was put on Cystone tablets 2 t.i.d. for 3 weeks with antibiotics and antiseptic gargles after which the patient reported expulsion of the calculus with remarkable subsidence of swelling pain and purulent discharge.

All the above mentioned cases were put on Cystone tablets 2 b.i.d. for a further period of two weeks to prevent recurrence. One year's follow up of the cases did not show any recurrence.

DISCUSSION

The efficacy of Cystone in the prevention of urolithiasis has been experimentally assessed in rats. The lower incidence of colloidal deposition, calcification and gross evidence of calculi in rats receiving Cystone therapy confirms that Cystone gives partial immunity to calculus formation (Dandia *et al* 1975).

It is significant that prolonged use of Cystone does not affect the electrolyte balance. Thus, by virtue of these therapeutic properties, Cystone facilitates the expulsion of calculi and concomitantly relieves the pain and spasm. Furthermore, the continued use of Cystone after the expulsion of calculi helps to prevent recurrence. Cystone therapy does not produce any toxic affects.

Surgical treatment corrects the condition by removing the stone, but does not deal with the causative factors of the condition. Quite often one painfully learns of a recurrence of calculi formation. Cystone alters the pH and corrects the crystalloid-colloid balance (Mukherjee 1974). It additionally possesses the remarkable property of disintegrating gravel or calculi. It acts on the binding mucin at the calculi and disintegrates the calculus and allow it to pass through the duct.

SUMMARY

1. Four cases of salivary calculi are presented.

2. In all four cases, it was noticed that the calculus was expelled after oral Cystone therapy.

3. Cystone seems to act in restoring the colloid-crystalloid balance.

4. Cystone has no chronic toxicity and hence may be safely used over prolonged periods.

5. With timely oral therapy with Cystone for salivary calculi, surgery can often be averted.

ACKNOWLEDGEMENT

The author is thankful to Dr. (Mrs.) Neeladevi Tawde and the staff members of Raobahadur Tawde Memorial Hospital, Satara for their generous help and to The Himalaya Drug Co., Bombay for the supply of necessary literature.

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