ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 05 | May - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TOPICAL APPLICATION OF FLUTICASONE WITH HYALURONIC ACID FOR PHIMOSIS

Paediatric Surgery

Sandeep Hambarde Associate Professor, Department of Surgery, Srinivas Institute of Medical sciences and Research Centre, Manglore, Karnataka, India.

Ashwini Hambarde Associate Professor, Department of Obstetrics and Gynaecology, Srinivas Institute of Medical sciences and Research Centre, Manglore, Karnataka, India.

ABSTRACT

Phimosis is being treated by local steroids like beta methasone, clobetasol since two decades with variable results. Studies have shown that introduction of fluticasone has increased the success of conservative management of phimosis. This article presents a novel technique of adding hyaluronic acid with fluticasone in the conservative management of phimosis. Addition of hyaluronic acid has a great impact in increasing the success of local steroid therapy.It completely eliminates chances of recurrence and need of surgery.

KEYWORDS

INTRODUCTION

Phimosis refers to the inability to retract the distal foreskin over the glans penis. About 95% of newborn males have this condition and in 90% of them, it becomes retractable because of spontaneous biologic process. Physiological phimosis occurs naturally in newborn males. Up to 10% of males will have physiological phimosis at 3 years of age and a larger percentage of children will have only partially retractible foreskins. One to five per cent of males will have nonretractable foreskins by age 16 years.' This inability to retract many times is interpreted as pathologic condition by parents and paediatricians and circumcision is advised.

Preputial skin at this stage is supple. Simple manoeuvres like gentle retraction with steroid application may suffice. But it has always been associated with smegmal collection on stopping application and further chances of adhesion formation with ultimate need for circumcision. Addition of enzyme hyaluronidase with fluticasone enhances its action increasing success rate of conservation treatment.It prevents recurrence of phimosis even after stopping the topical application.

AIM

To evaluate effectiveness of topical fluticasone in combination with hyaluronic acid in conservative management of phimosis at Department of Surgery, Srinivas Institute of Medical sciences and Research Centre, Manglore, Karnataka ,India.

METHOD

100 patients between 6 month to 10 year excluding phimosis with recurrent balanoposthitis were studied. We have treated these 100 patients, in the age group of 6 month to 10 years with topical fluticasone 0.005% with 1500U hyaluronic acid. All patients were treated by prilocaine cream application to prepuce 45 minutes prior to adhesiolysis. Adhesiolysis was done as an outpatient procedure and gentle massage was taught to parents. All patients underwent gentle adhesiolysis and were advised seitz bath and application of ointment twice daily for one month. Most important thing in adhesiolysis was complete retraction was never aimed. Only gentle dilation to open the prepuce without causing bleeding was done. Bleeding means injury which heals by fibrosis converting physiological phimosis into pathological one.

All patients were followed after one week and then after monthly for 3 months. The therapeutic response was graded as total success when there was complete exposure of glans and partial success when exposure of half of the glans, impended by balanoprepucial adherence of fibrosis at the prepuce and therapeutic failure when there was no exposure of glans.

RESULTS

Addition of hyaluronic acid definitely increased success of adhesiolysis in age group, in both one week , one month ,two month and three month follow up.Not a single case of partial success ,failure or recurrence presented to us even after weaning off topical application after one month of the procedure.

DISCUSSION

Whether to preserve or sacrifice prepuce has always been debatable issue. Few believed that it represents monument of love with maximum numbers of meissener's corpuscle and is a very sensitive structure.Few believes that it protects neonatal meatus and glans from friction and exposure injuries.some believe that it is vestigial and can be chopped without any harm while others feel that cutting it protects child from several problems like recurrent urinary infections, penile cancers etc. There is common layer of sqamous epithelium between glans and inner surface of prepuce and this keratin pearl dissect space between them and prevent readherence.

For the people who believe that prepuce is important structure and every effort should be taken to preserve it, only recurrent balanitis, paraphimosis and balanitis xerotica obliterance, are the only indications for circumcision.

Kikiros in 1993 used Hydrocortiscone and got 86% success.Flavenito used clobetasol in 2008 with 78% success. Sandeep in 2011 compared conservative management of phimosis by fluticasone alone and after adding hyaluronic acid with good results.

Kragballe in 1989 wrote that corticosteroids releases arachidonic acid from phospholipid and inhibit Mrna responsible for interleukin. I formation that lead to produce anti-inflammatory and immuno suppressive effect. Corticosteroida inhibit oedema, fibrin deposition, capillary dilatation. proliferation of fibroblasts, depletion of fibroblasts, depletion of collagen and cicatrization.Secondly, steroids have skin thinning effect due to inhibition of dermal synthesis of glycosaminoglycans by fibroblast resulting in loss of ground substance. They cause rearrangement of collagen and elastin fibres. Prolonged steroid application reduces horny layer and rehydration of tissue causes epidermal thickening. This rebound effect can be prevented by adding hyaluronic acid in it and gentle retraction of foreskin at least twice daily once phimosis has resolved for one month period.

Hyaluronic acid addition creates tissue planes and increases tissue permeability of steroids with reduced rebound phenomenon.

CONCLUSION

Addition of Hyaluronic acid in Fluticasone cream has impact in increasing success after adhesiolysis and prevents short term and long term recurrence.

Key Message

Conservative treatment of phimosis is getting increasing acceptance. Topical steroid combined with hyaluronic acid after gentle adhesiolysis are successful provided selection of cases is done properly and procedure of adhesiolysis is performed gently. From this study, it was observed that addition of hyaluronic acid with fluticasone 0.005% is more effective in increasing success of conservative management of phimosis with no significant complications and no recurrence.

REFERENCES

1 Favenito LA et al Jurnal of European uralogy supplement 2008, 73) 24
2 J.B. M. Neayiseng, L. Munkange et al fast and Central African Journal of surgery, 2005 10 no. 2 dec
3. Kikoros CS, SW, Woodward AA. The response of phimosis to local steriod application Pediatric Surg Int 1993:8.329-32
4. Saoji ,Vikrant et al.Indian Journal of paediatric dermatology 21[3]: P 184-186,jul- Sept 2020
5. Lane Palmer and Jellery Palmer, Urology Int. 2008, 72(1)
6. Sandeep et al. BH Journal,vol.53.No.2,2011
7. D Makhija et al. ISRN Urology, 2012;2012:707329
8. Lars Edvinsson, Mattias Linde, THE LANCET 2010;376:645