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INTRODUCTION

Topical steroid therapy (TST) has become one of the popular options for treating symptomatic physiological phimosis and as a prophylaxis for patient with at risk to get infection. There is no data available in this country regarding the use of TST in physiological phimosis. The aim of this study will also be to provide good guidelines for the treatment of physiological phimosis, in the patient at risk for a urinary tract infection (UTI) and to establish this as an alternative to our current treatment regime in the future.

METHODOLOGY

This is a prospective case-control study of TST for pediatric population age 5 year and below with physiological phimosis in Pediatric Surgery Unit, University Malaya Medical Centre (UMMC). The study was approved by local ethic committee in UMMC and carried out from March 2019 until November 2019. Parents were instructed twice daily circumferential application Clobetasone butyrate 0.05 % at the foreskin. Assessment of phimosis done at 2 weeks and 4 weeks after commencement of TST using Kikiros Classification(KRCS). Patients who achieved KRCS Grade 3 and below were considered as successful and not required to continue the topical steroid application. Those who have failed treatment after 4 weeks were counselled for circumcision. Data analysis was done using Wilcoxon signed rank test using IBM SPSS Statistic 23.

RESULT

From this study, 20 (86.9%) patients had successful outcome based on KRCS grade 3 and below. Most of the patients achieved successful outcome after 4 weeks' application. No documented complications such as local thinning of skin, skin inflammation, skin allergic reaction, or infection was noticed throughout the study.

DISCUSSION

In this study we observed that TST using Clobetasone Butyrate 0.05% is safe and effective in treating physiological phimosis in patients below 5 years old. Our successful rate after TST for severe physiological phimosis patient is 86.5% which is comparable with another study using the same type of steroid in Taiwan. The study reported a 77.3% successful rate in moderate potency TST which used clobetasone butyrate 0.05% (Yang et al., 2005).

From literatures, the duration for TST ranged from 2 weeks (CHU et al., 1999) up to 4 months (Marques et al., 2005). However, most of the studies reported successful results after 4 weeks of TST application (J. W. Lee et al., 2006). In our opinion, shorter duration TST is better for patient and for parents, in terms of adherence to therapy and risk of complications. Our aim is to investigate the retractability of TST after 2 weeks duration. However, only half of the patients turned up during 2 weeks follow up clinic due to various reasons. Further study can be done to investigate its outcome.

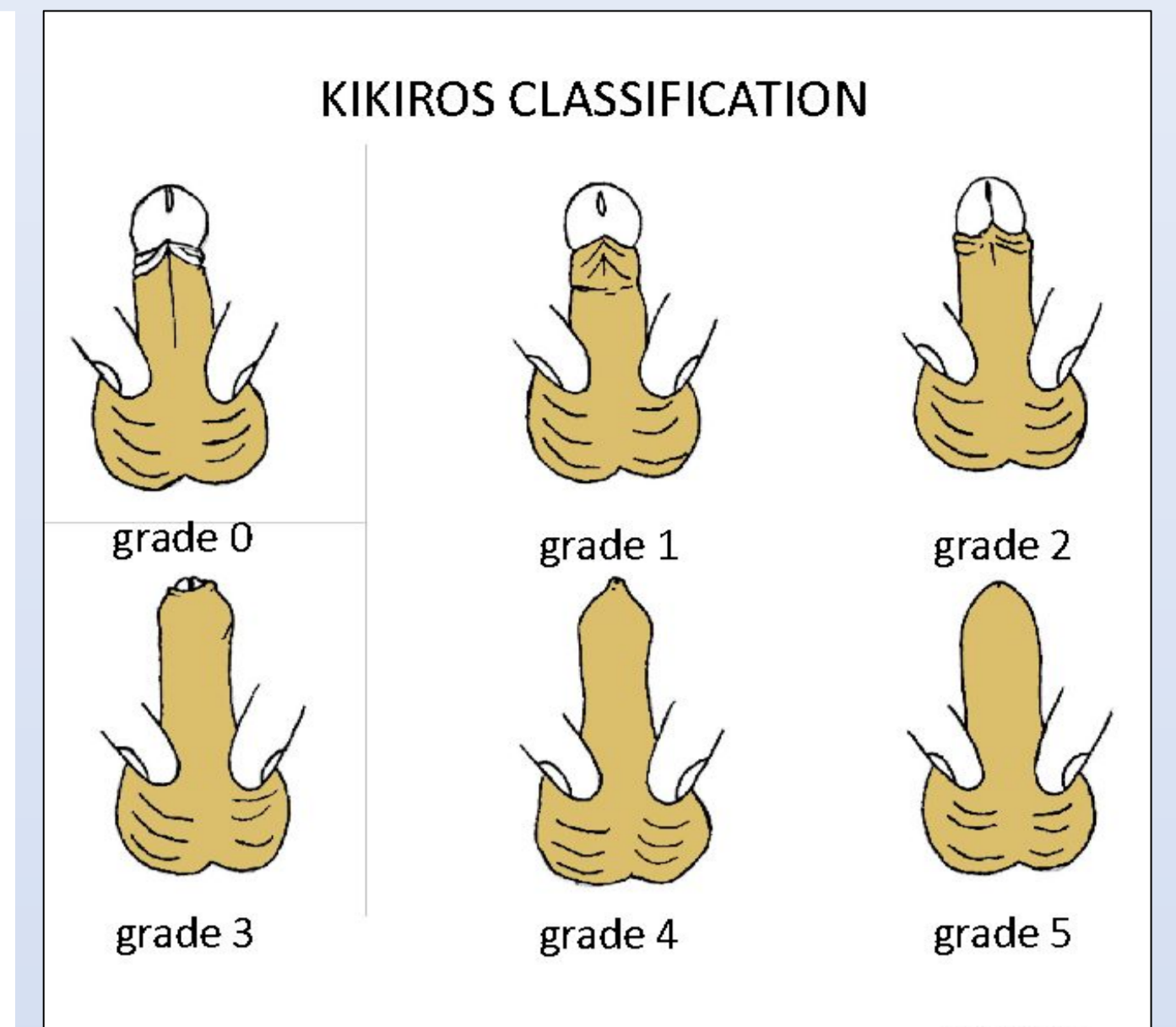
The mechanism of TST to relieve the prepuce from glans still hypothetical. Two main factors discussed in the literature regarding the role of TST in treating phimosis were anti-inflammatory effect and also promote thinning of the skin which subsequently helping the prepuce become more stretchable (Chi et al., 2011; Liu et al., 2016). Corticosteroids decrease arachidonic and hydroxyecosatetrenoidc acids in inflammatory proliferative skin disease (Monsour, Rabinovitch, & Dean, 1999). Furthermore, steroid has active role in inhibiting collagen production and antiproliferative effect on epidermis which results in thinning of preputial skin (Zampieri, Corroppolo, Zuin, Bianchi, & Camoglio, 2007).

Although TST has efficient local anti-inflammatory and immunosuppressive element, it is safe for application in children, without systemic absorption and effect towards the hypothalamus-pituitary-adrenal axis. A study has shown that long term TST did not raise morning cortisol level of the patient (Golubovic, Milanovic, Vukadinovic, Rakic, & Perovic, 1996).

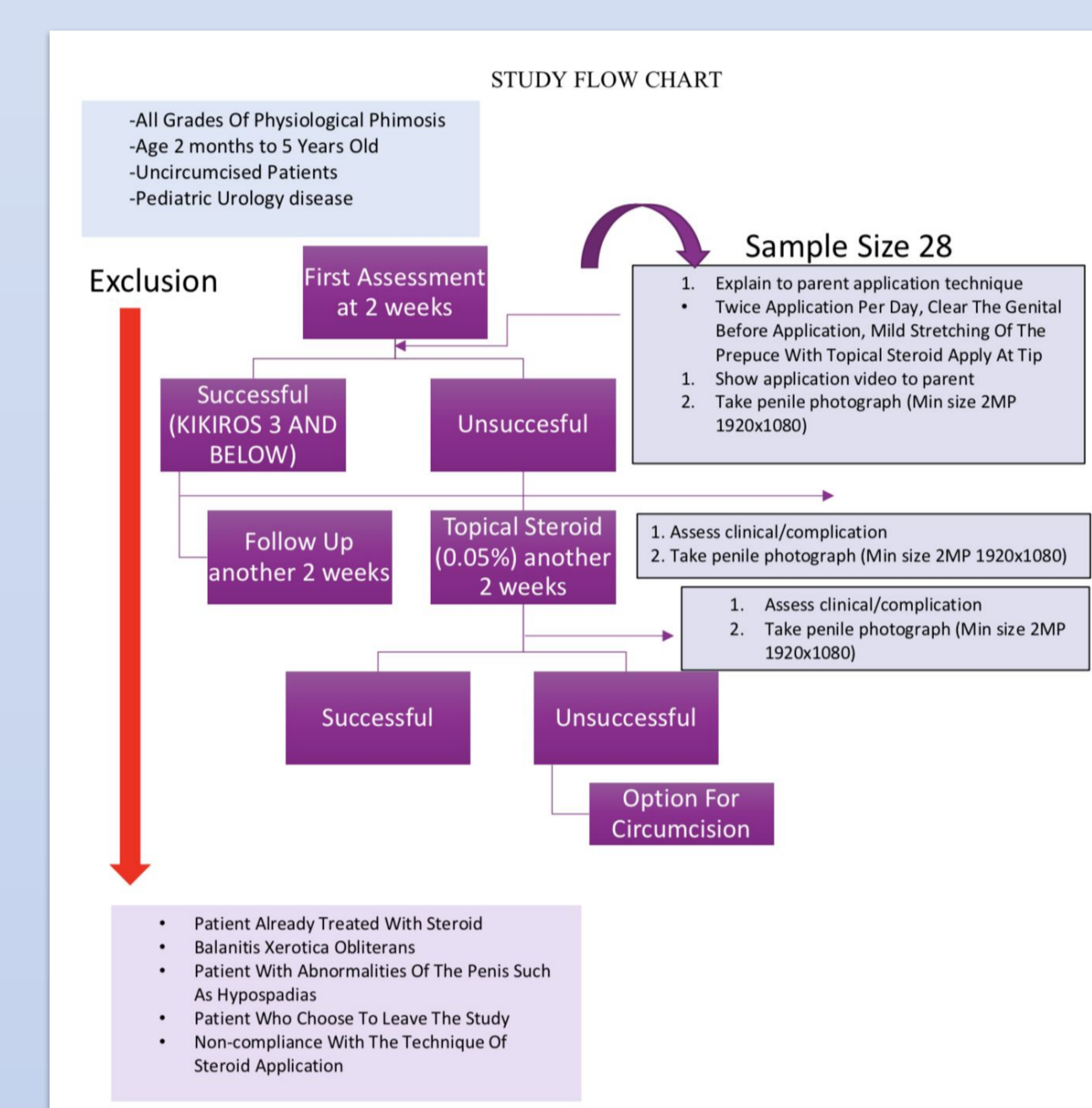
CONCLUSION

Topical steroid therapy is a feasible and safe alternative treatment for physiological phimosis in UMMC.

Grade	Description
0	Full retraction, not tight behind glans, or easy retraction limited only by congenital adhesions to the glans
1	full retraction of the foreskin and tight behind the glans
2	partial exposure of the glans
3	partial retraction and the meatus just visible
4	slight retraction but a distance between the tip of the prepuce and the glans, neither the meatus nor the glans can be exposed
5	absolutely no retraction



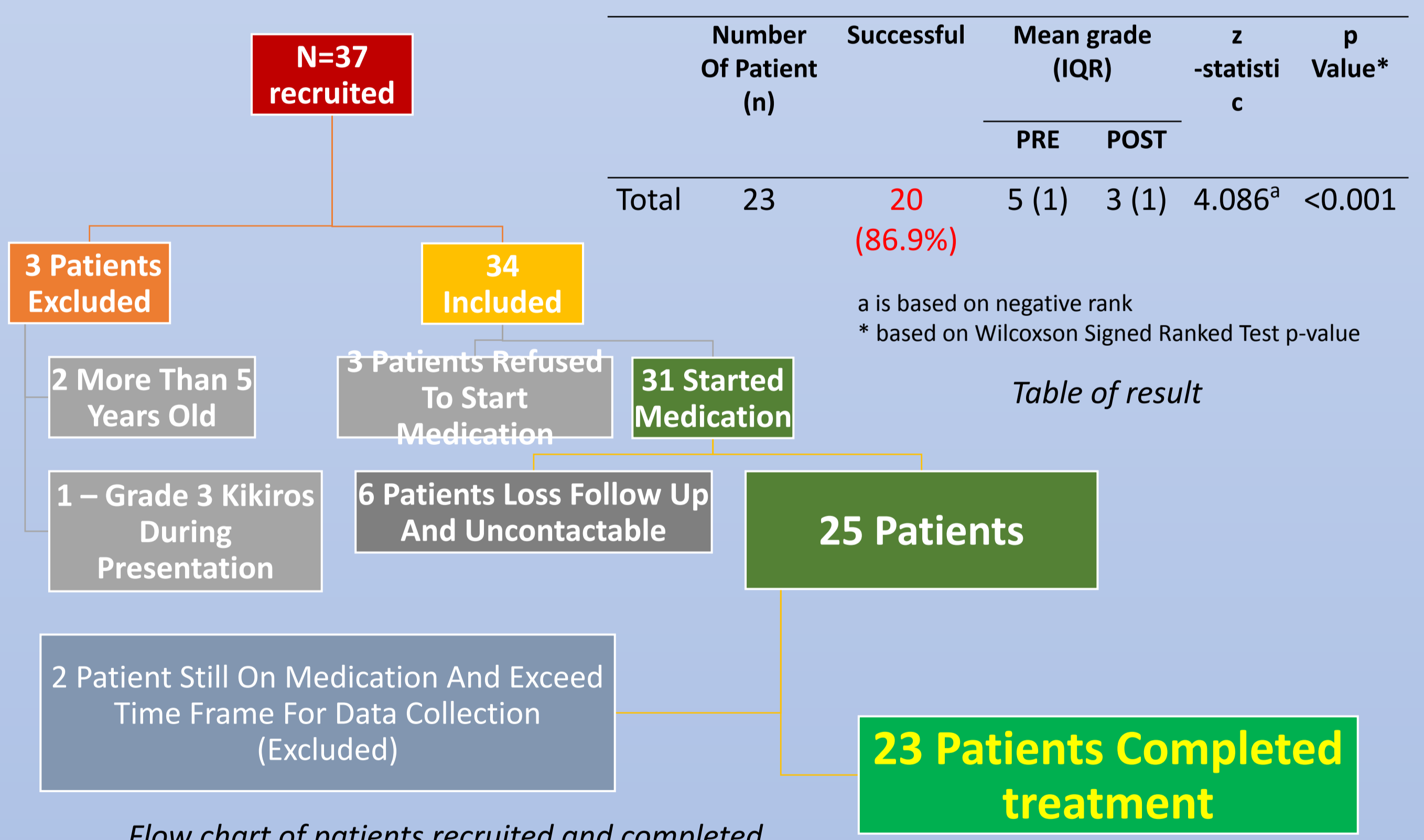
Classification of phimosis and drawing base on Kikiros Classification (Kikiros et al)



Study Flow Chart



Still images from demonstration video



Flow chart of patients recruited and completed

LIMITATION

Few limitations identified in this study were – single center, small sample size, high rate of drop out and non-randomisation. All of these factors reduce the strength of the study.

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Poster Title	60-120 pt
Authors & Institutions	40-80 pt
Section Title •Introduction •Materials & Methods •Results •Discussion •Conclusion	34-50 pt
Figure & Table caption	20-30 pt
Section Content	24-40 pt
References	16-30 pt
Acknowledgements	16-30 pt