INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD)
© 2026 IJNRD | Volume 11, Issue 4, April 2026 | ISSN: 2456-4184 | IJNRD.ORG

HORMONAL THERAPY OF CRYPTORCHIDISM. A PROSPECTIVE STUDY

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ABSTARCT
Cryptorchidism presents with an incidence of 1-5% with potential long-term implications on future fertility and overall health. This review focuses on surgical treatment modalities, their impact on testicular development, and function while addressing the Nordic consensus statement as well as current European Association of Urology (EAU) and American Urological Association (AUA) guidelines. Congenital and acquired cryptorchidism present distinctive challenges in surgical management, with different implications for fertility. While congenital cryptorchidism entails a risk to fertility and warrants early intervention, both retractile testes and acquired cryptorchidism also pose risks to fertility potential, underscoring the importance of evaluating treatment options. Testicular location and the child's age form the basis of a practical classification system for undescended testicles. Early diagnosis by clinical examination enables timely treatment. Imaging is reserved for selected cases only. Following guidelines, orchidopexy is recommended between 6-12 months of age for congenital cryptorchidism. Evidence increasingly suggests the benefits of early surgery for promoting testicular health and fertility potential. Current surgical options range from open to laparoscopic techniques, with the choice largely determined by the location and accessibility of the undescended testicle.

KEY WORDS
Cryptorchidism , orchidopexies, undescended testicles,Hormonal therapy, pediatric urology ,Infertility risk .

INTRODUCTION

Cryptorchidism represents one of the most common urogenital abnormalities in childhood and its incidence may be related to gestational age and newborn weight at birth, thus affecting 1.1–45% of preterm and/or < 2.5 kg neonates, and 1-4.6% of in term and/or > 2.5 kg infants .

Cryptorchidism is a consequence of abnormal testicular migration to the scrotum and the testis can be found in any place along its normal migration path . It is bilateral in 30% of cases and should be considered in differential diagnosis with ectopy, retractile testis and anorchia. Approximately, 80% of all undescended testes are palpable along the course of the inguinal canal .

Undescended testes should be treated starting within the 18th month of life with the aim of avoiding risks of cosmetic, fertility or malignancy complications at long term follow up, though over the last 30 years the optimal timing for treatment has been a widely debated issue in the scientific world. Cryptorchidism treatment options include medical therapy and/or surgery .[Consensus recommendations for surgical management of cryptorchidism is defined by a recent literature review .

AIM AND OBJECTIVES

AIM OF STUDY:

To evaluate the prospective study role of hormonal therapy in patients with cryptorchidism, including treatment outcomes and therapeutic approaches

OBJECTIVES OF STUDY:

- To study the incidence and clinical presentation of cryptorchidism in pediatric patients.
- To evaluate the diagnostic methods used for detecting undescended testes.
- To analyze the hormonal therapies used in the treatment such as Human Chorionic Gonadotropin and Gonadotropin-Releasing Hormone.
- To evaluate the effectiveness of hormonal therapy and surgical management in cryptorchidism.
- To identify possible complications associated with untreated cryptorchidism

METHODOLOGY

1 Study Design

The study will be conducted using both prospective and retrospective observational methods to evaluate the management and hormonal therapy used in patients diagnosed with Cryptorchidism.

2 Study Site

The study will be carried out in the Pediatric Surgery / Urology Department of a selected hospital where patients with undescended testis are diagnosed and treated.

3 Study Duration

The study will be conducted for a period of 6 months.

4 Study Population

The study population will include male pediatric patients diagnosed with cryptorchidism who attend the hospital during the study period.

5 Sample Size

Approximately 30–50 patients diagnosed with cryptorchidism will be included in the study depending on the availability of cases.

6 Inclusion Criteria

Male children diagnosed with cryptorchidism
Patients aged 0–12 years
Patients receiving hormonal therapy or surgical management
Patients whose medical records are available for retrospective analysis

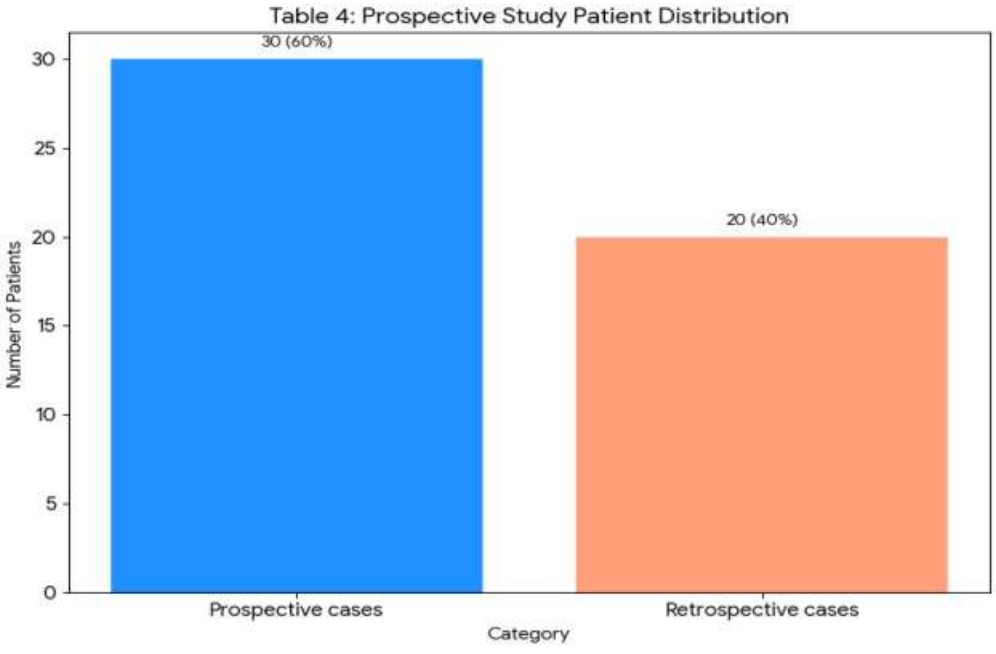
7 Exclusion Criteria

Patients with incomplete medical records
Patients above 12 years of age
Patients with other congenital genital abnormalities not related to cryptorchidism

RESULTS AND DISCUSSION

table 1: prospective study patient distribution

Category	**Number of Patients**	**Percentage (%)**
Prospective cases	30	60%
Retrospective cases	20	40%
Total	**50**	**100%**



This study included both prospective . The majority **(60%) were prospective cases** observed during the study period.

CONCLUSION

Orchidopexy remains a cornerstone in pediatric urologic surgery, constantly evolving in technique and approach. For palpable cryptorchidism, open single-stage surgery is safe and established. Current evidence gently advocates for single-incision surgery for lower testicles, however, definitive superiority over two-incision surgery remains elusive. Non-palpable cryptorchidism still poses challenges. Protecting blood flow is essential, given its role in preventing testicular atrophy. The gubernaculum sparing second-stage FS along with the Shehata variant show promise, both of which warrant further studies for affirmation. In all studies, the single-stage laparoscopic orchidopexy, which involves sacrificing the gubernaculum and its associated vessels, was found to be associated with a greater risk of testicular atrophy.

The role of hormonal therapy for cryptorchidism remains controversial. While hormonal therapy may offer some therapeutic benefit, potential risks like infertility and surgical delays cannot be ignored and warrant further investigation. Hormonal assessment may soon complement orchidopexies, offering a nuanced approach to treatment.

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