



## Case Report

Volume 6 Issue 2 – December 2017  
DOI: 10.19080/AJPN.2017.06.555736

Acad J Ped Neonatol

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# Is Prenatal Testis Torsion Unsalvageable Event?



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**Submission:** November 02, 2017; **Published:** December 21, 2017

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## Abstract

Etiology of prenatal testicular torsion (PTT) is still unknown and PTT is hard case to diagnose clinically. However, the necessity of surgical management and timing of surgery is also still controversial. Salvage rate of testicles who have immediate surgery is very low in the literature. A case of PTT is pointing out to timing of surgery management plan in testicular torsion is presented.

**Abbreviations:** PTT: Prenatal testicular torsion; B: Bilateral; R: Right; L: Left; IV: Intravaginal; EV: Extravaginal; h: Hour

## Introduction

Prenatal testicular torsion (PTT) is hard case to diagnose clinically and management plan on the grounds that it is seen rarely [1]. The first hour of birth, enlarged, non tender, firm testicular mass, and discolored scrotum is seen in examination of newborn [2]. The diagnosis of PTT may be difficult due to its rarity. Ultrasonography is beneficial to confirm the diagnosis [3]. After the diagnosis of case, the necessity of surgical operation and timing of surgery is still contradictive [1,4]. The aim of this report is pointing out to timing of surgery management plan in testicular torsion.

## Case Report



**Figure 1:** Right testis was enlarged, tender, firm in consistency and the overlying skin was dark red in color.

A 40-week-old male infant of appropriate maturity for gestational age, was born vaginally to a 23-year-old gravida3, para2 woman. The baby's birth weight was 3950 g with Apgar scores of 8 at 1minute and 9 at 5 minutes. Since the right hemiscrotum swelling was found at birth, the patient was referred to our department of urology at an hour after birth. Physical examination revealed a normal abdomen, a painless, swollen blue firm right hemi-scrotum that was no transmitted light

and a tender right testis (Figure 1). The prenatal ultrasound examinations were normal. Vital signs and laboratory values were normal. Tumor markers were also requested; all resulted normal. An urgent Color Doppler Ultrasonography examination revealed no blood flow in the right testis and blood flow was documented within the left testis. The scrotum was immediately explored. At surgery, the right testis was completely necrotic (Figure 2). The right Orchiectomy was performed. The left orchiopexy was performed due to the risk of asynchronous contralateral testicular torsion. Histopathological examination of the right testis revealed ischemic necrosis. The postoperative process was uneventful. The left testis was palpable and viable at 3-month follow up.



**Figure 2:** Right scrotal exploration 3 hours after birth reveals 720-degree torsion of spermatic cord and severe testicular ischemia

## Comment

Etiology of PTT is still uncertain [1]. High birth weight, difficult birth, breech presentation trauma are factors which go

along with PTT. Cremasteric contraction, which is occur more than normal inside of the uterus, causing the torsion by increasing mobility layers of tunica vaginalis [1,5]. There is a consideration about torsion, which is diagnosed at the first hours right after the birth, has been occurred period of uterine and it is irreversible [5,6]. Animal experiment which has been done; demonstrated that testicular ischemia causes loss of spermatogenesis in the first 6hours and loss of hormonal function in the 12hours [7,8]. The most broad scientific research which is related to the PTT has shown, salvage rate of testicles who have immediate surgery is very low [1,2,4,5,9-13] (Table 1). Furthermore, in these studies

atrophia of testicles is unavoidable in follow-up orchiopexy which is done bilateral or unilateral for hormonal functions in bilateral testicular torsion. The case of unilateral prenatal testis torsion we present is different aspect of necessity and timing of surgery. The clinical features demonstrated that sorted testis was infarcts and non-viable. There are variable opinions about risk of anesthesia in the newborns' testicular surgery [5,14]. Despite the shortness of surgery and deciding to the operation with family and anesthesiologist, testicle couldn't be salvaged. This situation was confirmed by histopathology examination. Emergency surgery would not have changed the outcome.

**Table 1:** Clinical and surgical aspect, surgical timing and salvage rates in patients with prenatal testicular torsion

Study	Number of Affected Testis	Side		Torsion Type	Time of Surgical Intervention		Number of Testis Salvaged	Rate %
Al-salem et al.[1]	12	B	1	EV	<6h	4	0/4	0
		R	4		>6h	8	3/8	37.50%
		L	6					
Burge et al. [2]	18	B	1	10 EV	>6h		0/18	0
		R	?	3 IV				
		L	?	5 other				
Yerkes et al.[4]	22	B	4	1 IV	<6h	2	0/2	0
		R	?	21 EV	>6h	16	0/16	0
		L	?					
Brandt et al.[5]	25	?	1 IV 24 EV	>6h		0/25	0	
Djahangirian et al. [9]	48	B	2	?	>6h		5/48	10%
		R	22					
		L	20					
John et al. [10]	26	B	2	1 IV	>6h		0/26	0
		R	13	25 EV				
		L	9					
Arena et al. [11]	8	B	1	8 EV	<6h	1	1/1	100%
		R	2		>6h	7	0/7	0
		L	4					
Pinto et al. [12]	11	B	3	?	<6h	8	2/8	25%
		R	3		>6h	3	0/3	0
		L	2					
Kaye et al. [13]	15	B	2	?	>6h		0/16	0
		R	7					
		L	4					

### Conclusion

When risk of anesthesia in the newborn and the low salvage rate of PTT is considered, conservative approach should be chosen and elective surgery should be done instead of emergency surgery.

### Conflicts of Interest

There is not a conflict of interest between the authors.

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DOI: [10.19080/AJPN.2017.06.555736](https://doi.org/10.19080/AJPN.2017.06.555736)

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