



A Disaster Complication with a Volunteer of Kidney Donor without Nephrectomy

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Abstract

It has been told that nearly 30000 kidney transplants are performed from live donor in the world every year, live donor surgery may be associated with Complications, to best our knowledge the case that presents here is the first and the most disaster complication.

A live donor nephrectomy is not a complete safe procedure it may be accompanied with some complications including hemorrhage and infection and in a very rare incidence death.

Here we present a case just skeletonized left kidney laparoscopically and finishing procedure without nephrectomy but with acute rising creatinine to more than doubling and a very big morbidity with him.

A volunteer man for donation kidney with 34 years old age was selected for donor nephrectomy for left side.

After just laparoscopic skeletonized of left kidney without nephrectomy, on day 7 he referred with more than doubling creatinine (acute kidney injury) and fever and anemic.

Conclusion: To best of our knowledge this is the first case with reduced renal function (acute kidney injury) and morbidity without nephrectomy post laparoscopic skeletonizing left kidney.

Keywords: Laparoscopic; Kidney donor; Creatinine rising; Complication; Morbidity

Introduction

It has been told that surgical complications of donor nephrectomy including majors and minors which are sequential 3% to 6% and 20% and donor nephrectomy procedure is not completely free of complications, and laparoscopic operation is safe and encourage for increasing live donor [1]. We present a case that was in complete health condition after half an hour anesthesia and laparoscopic exploration of left kidney and skeletonizing because a problem with the recipient, procedure without nephrectomy was finished. But after 7 days the donor referred with rising creatinine and fever and anemia.

Case Presentation

A male with 34 years olds as volunteer of kidney donor referred to our center after full evaluation he was approved for kidney donation, in theater room under general anesthesia he was explored for left kidney but because a problem with recipient procedure was discontinued and after full recovering from anesthesia he referred to wards. He was okay that on day three he left the ward in good condition. On day 7 he was admitted to ward because of fever and a collection on left side of abdomen (about 380 cc) and pain with abdomen and anemic and doubling of creatinine level in serum: Figure 1(a-e), HB: 7 mg/dl, creatinine 1.26 mg/dl he was prescribed antibiotic according to culture of collection which was taken by percutaneous drainage of collection and after three weeks with creatinine level of two Times of initial level and HB: with 12 mg/dl was discharged.

Discussion

Kidney transplant from live donors for treatment of chronic renal failure are carried out about 30,000, numbers in the world every year [2]. It has been showed in live donor, graft survival and patient survival is better than deceased donor [3]. But procedure of nephrectomy in live donor doesn't associate completely free of complications, some of complications are minor and some are majors. Major morbidity and overall morbidity are 5% and 15% respectively [4]. Caring of live donor during nephrectomy procedure is very important especially controlling of blood pressure, bleeding

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Hematology			
Test	Result	Unit	Reference value
CBC			
R.B.C	5.0	$\times 1000/\text{mm}^3$	4.0 - 11
R.B.C	3.66 L	$\times 10^{-6}/\text{mm}^3$	M: 4.5-5.8 ; F: 4-5.2
Hb	10.0 L	gm/dl	M: 14-18 ; F: 12-16
Hct	30.5 L	%	M: 39-52 ; F: 35-46
M.C.V	83	fL	80-98
M.C.H	27	Pgm	27-32
M.C.H.C	33	%	32-36
Platelet	401	$\times 1000/\text{mm}^3$	150-450
Morphology			
RDW	15.6	%	11.5-15
PDW	11.7	fL	10-17
MPV	9.5	fL	8.5-12.5
P-LCR	21.9	%	19-45

Biochemistry			
Test	Result	Unit	Reference value
Blood Sugar	129	mg/dl	Up to 200
Urea	42	mg/dl	M: 19-44 ; F: 15-40
Creatinine	1.27	mg/dl	0.7-1.4
Serum Na	-	mEq/L	136-145
potassium	-	mEq/L	3.6-5

Figure 1a: Increase HB and still rising creatinine on day 23 post exploration.

بیوشیمی روتین			
Test	Result	Unit	Reference value
Blood Sugar	140	mg/dl	Up to 200
Urea	16	mg/dl	M: 19-44 ; F: 15-40
Creatinine	0.60 L	mg/dl	0.7-1.4
Serum Na	141	mEq/L	136-145
potassium	3.6	mEq/L	3.6-5

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*: Rechecked , H: High , L: Low, **:Urgent

Figure 1b: Creatinine of donor before exploration.

بیوشیمی روتین			
Test	Result	Unit	Reference value
Blood Sugar	105	mg/dl	Up to 200
Urea	41	mg/dl	M: 19-44 ; F: 15-40
Creatinine	1.16	mg/dl	0.7-1.4
Serum Na	141	mEq/L	136-145
potassium	4.3	mEq/L	3.6-5

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Figure 1c: Creatinine of donor during discharge of hospital.

and any medicine which may injure the kidney. Acute Kidney Injury (AKI) is mostly because of pre renal, so stabilized blood pressure and control of bleeding and also fluid supply to have diuresis is very important in prevention of kidney injury. Another cause of AKI is osmotic nephrosis especially with large dose of mannitol [5]. It must be cared about the safety dose of mannitol. Our presenting case is an AKI due to pre renal and in which infection was super imposed, of course because of gradually bleeding from portside in abdominal wall, which spontaneously was stopped and infection was super imposed.

Most commonly, an AKI is due to volume loss in the form of bleeding, vomiting, excess drainage, and sometimes because of medicine. It will be reversed most time. A more severe degree of hypovolemia leads to Acute Tubular Necrosis (ATN) also it improves mostly with definitive treatment.

Conclusion

It must be considered although laparoscopic donor nephrectomy is safe and effective but it may be associated with important

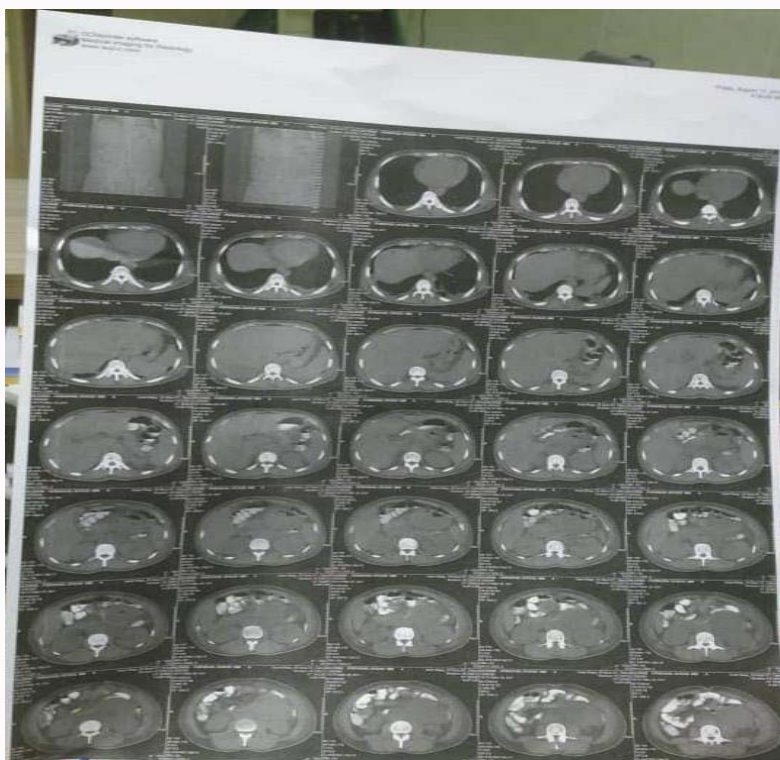


Figure 1d: CT of abdomen which discloses collection on left side.

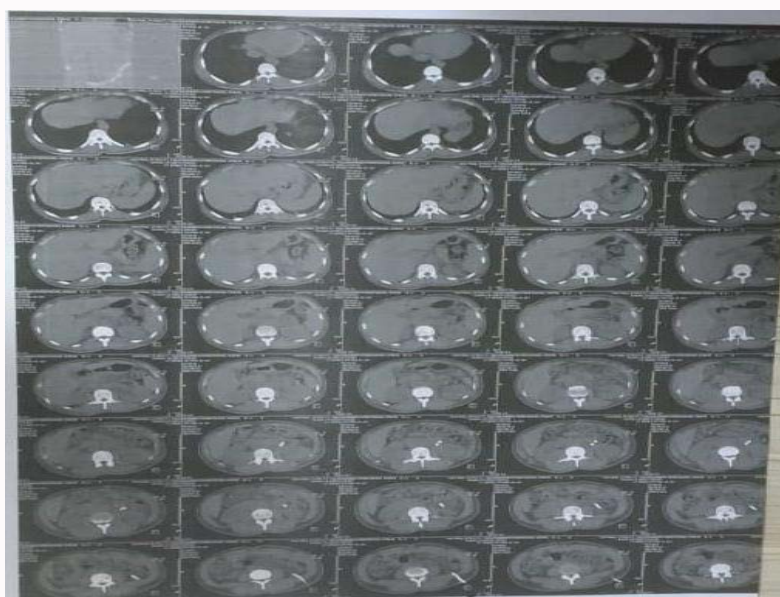


Figure 1e: CT of abdomen with drainage catheter.

complication even death.

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