

# Multiple Anamolies in a Single Male Cadaver

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**Abstract:** During the routine dissection in the department of anatomy AMC for medical students we have observed variations in the donated male cadaver of Sri. MANDAPATI KRISHNA MURTHY aged about 72 Years, by occupation who was a pharmacist in government service. He had never experienced any clinical complications in spite of the presence of numerous anatomical variations. Lateral deviation of rectus abdominis muscle on the left side. Hypertrophied liver with large nodule over the superior surface with associated accessory lobes over caudate & quadrate lobes on visceral surface and an intra hepatic gall bladder. Stomach showed normal size but an hour glass contraction, was observed. Renal vascular arrangement showed accessory renal artery and vein on left side and additional renal arteries on both right and left kidneys, and the anatomical position of pelvises of both kidneys showed anterior prominence.

**Keywords:** Rectus divarication, Stomach, Renal artery, Hypertrophy liver.

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## I. INTRODUCTION

The **rectus abdominis muscle**, also known as the "**abdominals** or **abs**," is a paired muscle running vertically on each side of the anterior wall of the human abdomen, as well as that of some other mammals. There are two parallel muscles, separated by a midline band of connective tissue called the linea alba. It extends from the pubic symphysis, pubic crest and pubic tubercle inferiorly, to the xiphoid process and costal cartilages of ribs V to VII superiorly.<sup>[1]</sup> It is contained in the rectus sheath, which consists of the aponeuroses of the lateral abdominal muscles. Three bands of connective tissue called the tendinous intersections traverse the rectus abdominus, which separates this parallel muscle into eight distinct muscle bellies. In the abdomens of people with low body fat, these bellies can be viewed externally and are commonly referred to as a "**four, six, or eight pack**" depending on how many are visible although six is the most common. A diastasis recti may appear as a ridge running down the midline of the abdomen, anywhere from the xiphoid process to the umbilicus. It becomes more prominent with straining and may disappear when the abdominal muscles are relaxed. The medial borders of the right and left halves of the muscle may be palpated during contraction of the rectus abdominis.<sup>[5]</sup> The condition can be diagnosed by physical exam, and must be differentiated from an epigastric hernia or incisional hernia, if the patient has had abdominal surgery.<sup>[2]</sup> Hernias may be ruled out using ultrasound. Abnormalities of liver are rare. But most common one is irregularity in form and in number of lobes. The normal liver of pig, dog, and of camel is that they have distinct and separate lobes. occasionally, the human liver may show this reversion in varying degrees. Moser has described a liver with 16 lobes. Most abnormalities of the liver are without clinical significance and are found at necropsy or at operation for another condition. As is this case. These lobes are undersurfaced and not clinically detected. Anterior abdominal wall defects are frequently associated with accessory hepatic lobes. (**Surg Radiol Anat 2011;33:819**) Hour glass contraction presents in 2 forms. Congenital and acquired. The congenital is characterised by the absence of pathological process, as it is in this case. Acquired on the other hand is distinguished by pathological process, in case of cicatrices of former gastric ulcers.

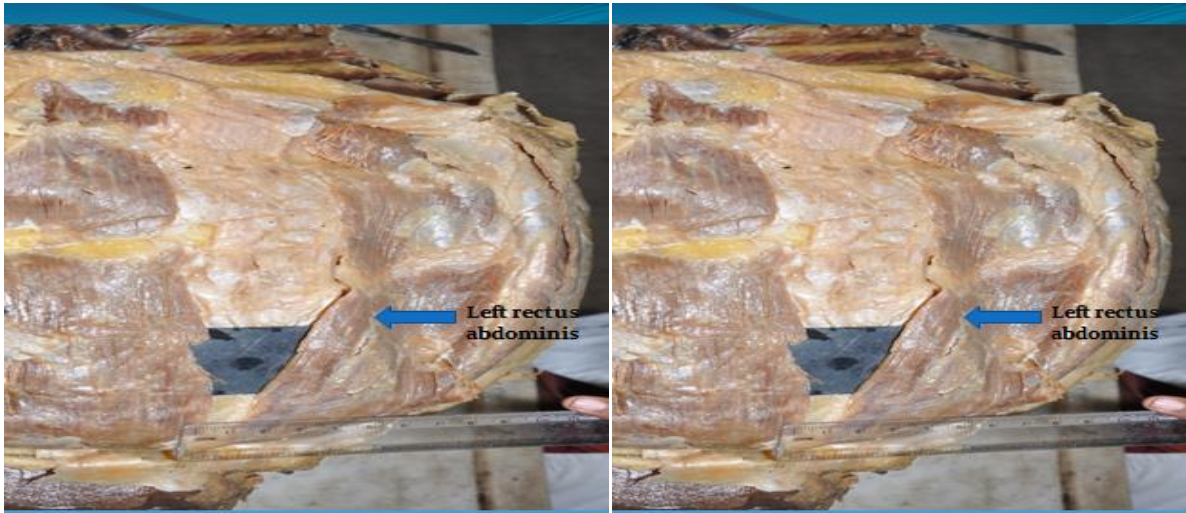


Fig 1, 2: Showing left rectus deviation

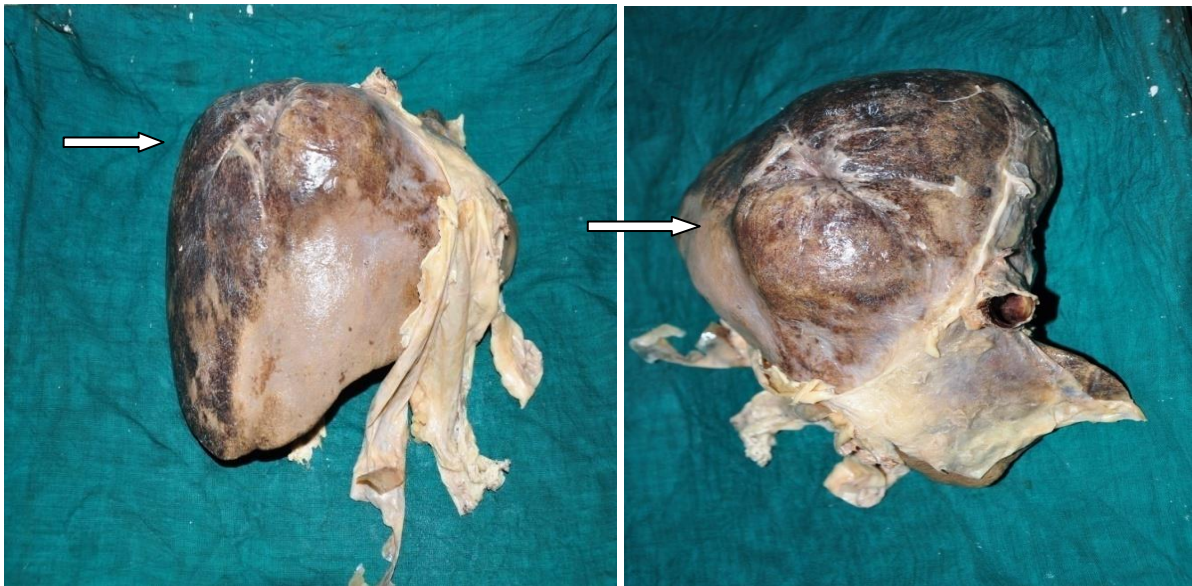


Fig 3, 4: Showing nodule over the superior surface with kinking of tissue nearby.

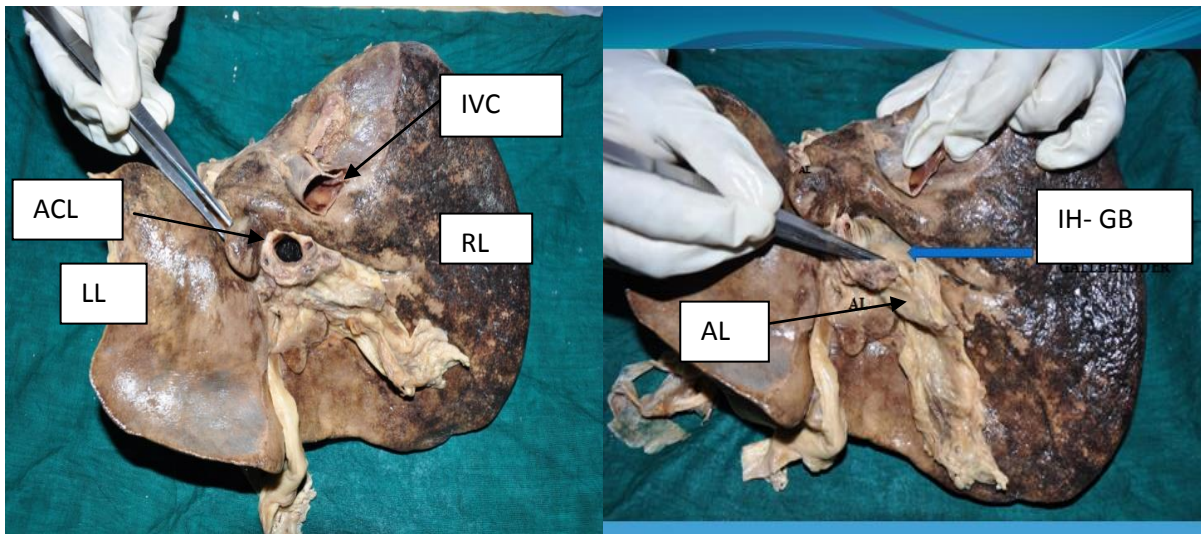


Fig5, 6: Showing Accessory lobes on Caudate and Quadrate lobes. ACL-Accessory lobe. Ivc- Inferior vena cava, LL- Left Lobe, RL- Right Lobe, IH-GB- Intrahepatic hepatic gall bladder.



Fig 7, 8: Showing Hour glass contracture of stomach and interior of it.

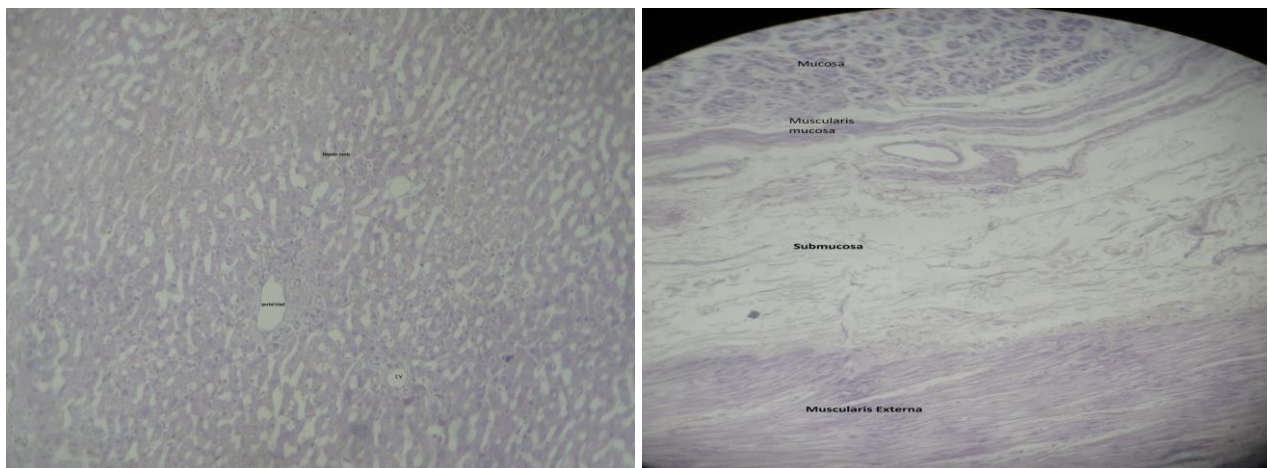


Fig 9: Showing normal microscopic structure of Accessory lobe of liver and stomach mucosa with normal histological pattern.

### III. DISCUSSION

Diastasis means “to separate“ diastasis recti / divarication of rectus muscle, is separation of rectus, abdominis muscle into right and left halves, the condition is usually not associated chronic morbidity and mortality. *Rectus abdominis* (RA) is considered the main responsible of trunk flexion. It is caused by stretching of linea alba. The cause in males is obesity (protruded abdomen) , heavy weight lifters, (or) any pathology (ascitis) causing distention of abdomen. In females pregnancy may cause divarication of recti. In children it is common in pre mature newborns, as their recti are not fully developed. The separation varies from 2-3cm wide to maximum 12 -20 cm.

Lobulated development of liver commonly seen arising the from caudate lobe usually they are small and few in number clinically insignificant complications arise if they are large, intraHepatic, attached to liver by mesentery, undergo strangulation, infarction and torsion. As these are present undersurface not detected clinically. They did not cause any symptoms as they are having the normal histology as the liver as confirmed by slide.It is detected normally in necropsy as is this case.

**Hour glass contracture** is always of pathological origin, the view formally held by some, occasionally a congenital malformation, is discredited by more recent investigations. The common reasons are: Chronic ulcers(either isolated or associated with a new growth which may lead to the production of a cicatrice contraction . Contraction of adhesions outside the stomach following a suppurative infections.(maybe associated with chronic ulcers) clinical presentation: Epigastric pain (tender epigastrium). Bloated sensation of the stomach(no abdominal distention) . Intense pain few hours after taking meals. Frequent emesis (relief of pain following vomiting) . Hemoptysis, Malena. Congenital cases as by Baker the constriction was one inch long and admitted only little finger. There was no pathological process associated

with his case as is our case. The patient never suffered from any illness. It admitted 1 & ½ fingers and the histological section revealed no pathology conferring it to congenital.

#### **IV. CONCLUSION**

Presence of divarication of recti causes decreased abdominal muscle tone, weak pelvic alignment, poor posture, chronic back ache, development of hernia.

Accessory lobes of liver do not show any clinical significance until and unless it is of anomalous size. Hour glass contracture of stomach is identified by contrast x ray following barium meal. Correction of it involves removal of the diseased part and correction of contracture along line of suture.

Knowledge of anatomy of renal blood supply is essential for good outcome following renal surgeries. Looping of renal artery branches around inferior vena cava is a rare presentation may cause syncope and bilateral pedal edema. Supernumerary renal vessels are common anomalies is a source of potential error during operations in the retro peritoneum and on kidneys. This man was asymptomatic with no ill effects lived his life without knowing there were multiple anomalies in him leaving us puzzled. This shows patients with this type of variations may be asymptomatic.

#### **REFERENCES**

- [1] Susan Standaring Gray's anatomy. The anatomical basis of clinical practice 39<sup>th</sup> edition London, Elsevier Churchill living stone publishers. 2005, 1274-75.
- [2] Campbell- Walsh, urology 10<sup>th</sup> edition- wein kovoussi,
- [3] Bailey and love short practice of surgery 25<sup>th</sup>. Williams, Bullstrode
- [4] SRB' manual of surgery 3<sup>rd</sup> edition Sriram Bhatt.M
- [5] Fernandes RMP, come FHP, favorito LA. Abidhu-figueredo m.babinskiMA. Triplere renal vein an uncommon variation. Int j morpol. 2005 ; 23;241-33
- [6] Harrison LH , Flye MW, Seigler HF, Incidence of anatomical variants in renal vasculature in the presence of normal renal function . Ann surg 1978,188(1): 83-9
- [7] Graves FT, The anatomy of the intra renal arteries and its application to segmental resection of the kidney. Br J Surg 1954;42;132-39
- [8] Keibel F, Mall FP, eds, Manual of human Embryology. Vol 2. Philadelphia, J.B.Lippincot , 1912; 820-825
- [9] Transactions of pathological Society , London, 1866-67, vol.Xviii, p. 105.