

Inguinal masses in pregnancy: A case of round ligament varicosty in Ghana

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Abstract

Round ligament varicosities (RLVs) are noted to present diagnostic difficulties for clinicians and are often mistaken to be inguinal hernias. Very few of such cases have been reported globally. To the best of my knowledge, no case on RLV has been reported in Ghana and as such, this case study is likely to be the first reported case in Ghana. A 27-year-old pregnant woman reported to the hospital with complains of bilateral inguinal swelling accompanied with intermittent excruciating pain. The swellings are visible with the woman in the standing position but disappear with the woman lying supine. The swellings are however prominent in the supine position on Valsalva maneuver. The woman was diagnosed with bilateral inguinal hernia and was scheduled for possible surgery after delivery. Dilatation of the vasculature of the round ligament presents as a bulging mass within the inguinal canal, mimicking inguinal hernias when examined physically. The distinction between the two, thus, the RLV and inguinal hernia is established with ultrasound scan examination. Diagnosing RLVs require the use of a color/power Doppler ultrasound machine and also well-trained clinical personnel with sonographic expertise. Ultrasound scan has been recognized to diagnose RLV effectively and to produce a clear-cut distinction from inguinal hernia. Accurate diagnosis of RLV is also essential to avoid unnecessary surgical interventions since the condition is noted to mostly resolve by itself after delivery.

Keywords: Inguinal hernia, round ligament varicosity, ultrasound

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INTRODUCTION

Round ligament varicosities (RLVs) are rare cases which mostly occur during pregnancy.^[1] They are swellings usually found within the inguinal region and present with multiple blood vessel dilatation. Lechner *et al.*, in a prospective study involving 28 patients over 9 years found out that RLVs in pregnancy are not a precursor to inguinal hernias.^[1] In most pregnant women diagnosed with RLV, the condition was noticed to resolve after a few weeks.

RLVs are noted to present diagnostic difficulties for clinicians and are often mistaken to be inguinal hernias.^[2] Very few of such cases have been reported globally.^[3] To the best of our knowledge, no case on RLV have been reported in Ghana and as such, this case study is likely to be the first reported case in Ghana.

The aim of this paper is to present a case of RLVs in pregnancy and to elucidate the importance of ultrasound scans in correctly diagnosing the condition.

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CASE REPORT

A gravid young married woman of age 27 years, a civil servant and a gravida one mother reported to a primary healthcare facility with complains of bilateral inguinal swelling accompanied with intermittent excruciating pain. The swellings are visible with the woman in the standing position but disappear with the woman lying supine. The swellings are prominently noticed in the supine position on Valsalva maneuver. The swellings are noted within the superficial ring of the inguinal canal. They are immobile and warm to touch. The woman was diagnosed with bilateral inguinal hernia and was scheduled for possible surgery after delivery. The woman reported again to the hospital after about 5 days with complains of severe inguinal pain. An abdominopelvic ultrasound scan was then requested to assess the situation.

Ultrasound scan findings

A Toshiba Nemio XG ultrasound machine was used for the scanning protocols. Both high multi-frequency linear and low multi-frequency curvilinear probes were used. The linear probe was used to scan the inguinal regions while the curvilinear probe was used the scan the abdomen.

The liver, kidneys, gall bladder, spleen, and pancreas showed normal sonographic features without any obviously detected abnormalities. A singleton intrauterine fetus with normal cardiac activity, adequate liquor volume, and a posterior placenta within the upper segment of the uterus was detected. No obvious fetal anomaly was detected. Fetal biometry is as follows [Figure 1]:

BPD = 80.9mm HC = 288.4mm
AC = 258.2mm FL = 56.8mm

EGA = 31W EDD = October 12, 2019
Scan date = August 10, 2019

Sonographic assessment of inguinal region showed bilateral ovoid hypoechoic masses with tubular channels [Figure 2] and internal vascularity on colour doppler interrogation [Figure 3]. There was no sonographic evidence of bowel, thrombus, or venous rupture within the inguinal regions.

Based on the sonographic findings, the woman was diagnosed of bilateral RLVS.

DISCUSSION

The round ligament is comprised of arteries, veins, lymphatics, and nerves which originate from the lateral aspect of the uterus and channels through the abdominal ring and inguinal canal.^[4] Dilatation of the vasculature of

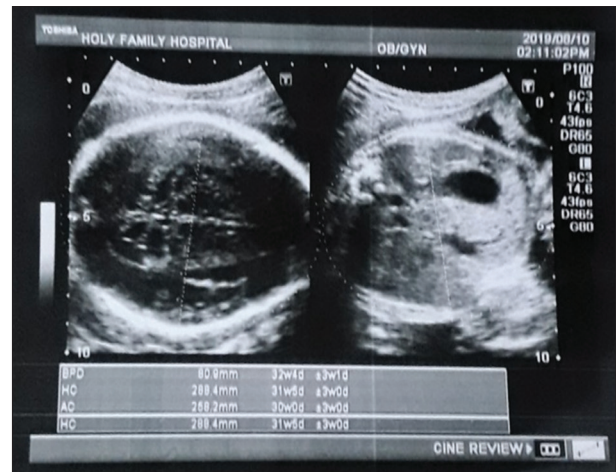


Figure 1: Sonogram of fetal head and abdomen

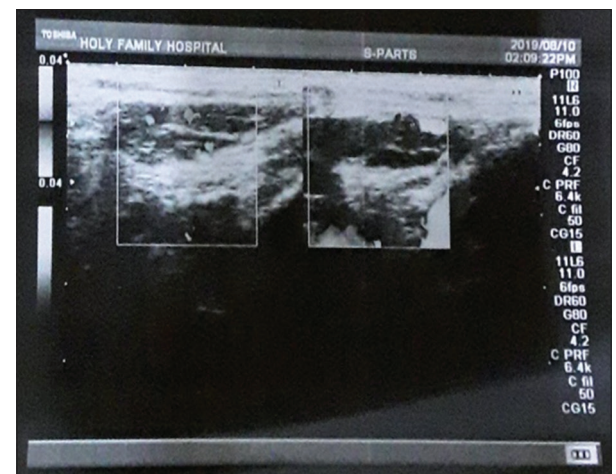


Figure 2: Two-dimensional grayscale sonogram of inguinal masses

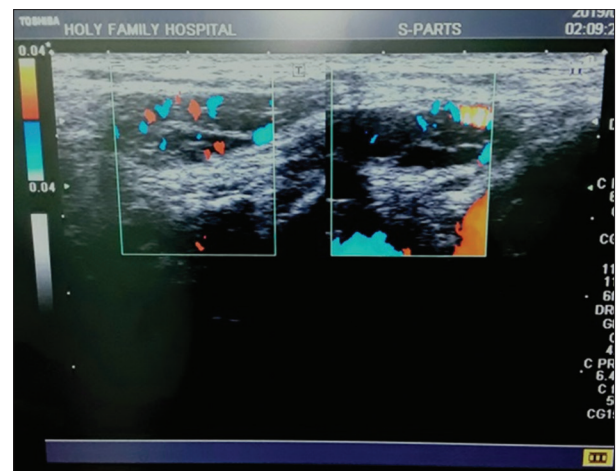


Figure 3: Color Doppler sonogram of inguinal masses

the round ligament presents as a bulging mass within the inguinal canal, mimicking inguinal hernias when examined physically. Inguinal hernias themselves have been noted to be uncommon during pregnancy, since most of the

abdominal structures that could fill a hernia sac are displaced upward as the pregnancy grows bigger.^[5] The distinction between the two, thus, the RLV and inguinal hernia is established with ultrasound scan examination.^[6] Although other imaging modalities can be employed to diagnose RLVs, ultrasound remains the modality of choice because it is easily accessible and affordable.

The usefulness of ultrasound in diagnosing RLVs cannot be overemphasized. It is noted to prevent the possibility of unnecessarily exposing patients to ionizing radiation and surgical interventions as the condition is noted to mostly resolve after delivery.^[4] Two cases of RLVs detected in two regional hospitals in Japan were conservatively managed and the condition noted to disappear after a few days of normal vaginal delivery in both cases.^[7] Another study also noted the disappearance of the RLVs after delivery without any form of surgical intervention and also recognized the importance of diagnosing the condition accurately to avoid unnecessary surgeries.^[3] Similarly, this study also noted that the RLVs resolved after the woman had a simple vaginal delivery. This was noted on the 1st day of postnatal visit by the woman.

Diagnosing RLVs require the use of a color/power Doppler ultrasound machine and also a well-trained clinical personnel with sonographic expertise. In Ghana, some public hospitals have been equipped with these machines but lack the personnel with requisite knowledge and skill to operate them. Some of the facilities engage the services of quack sonographers who are unable to operate the equipment efficiently and to diagnose conditions like RLVs correctly.

CONCLUSION

RLVs have the tendency of being confused with inguinal hernia. Ultrasound scan has been recognized to diagnose the condition effectively and to produce a clear cut distinction from inguinal hernia. It is important to note that sonographer expertise and the application of a color/power Doppler interrogation of inguinal masses play a

significant role in diagnosing RLV. Accurate diagnosis of RLV is also essential to avoid unnecessary surgical interventions since the condition is noted to mostly resolve by itself after delivery.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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