

Ultrasound Investigation of the Complications of the Uterus and Scar After Cesarean Section

SEZARYAN AMELİYATI SONRASI GÖRÜLEN UTERUS VE UTERUS SKAR KOMPLİKASYONLARININ ULTRASONOGRAFİK ARAŞTIRMASI

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SUMMARY

Nine cases of puerperal complications localized in the uterine body after cesarean section were followed up by the means of the ultrasound method. Ultrasound signs showing pathological changes in the involution of the uterus and the region of the scar were found. In the endometriis were observed, fibrinose plaquets on the wall of the uterus represented as a lined hyperechogenical formings; enlargement of the uterus with or without presence of gas; increased echogenity in the region of uterine suture and/or tissue defect; significant quantities of gas in the area of the ligatures / hyperechogenity without clear delimitations/; In hematomas the limits were clear and there was well formed capsule with echonegative content. The suppuration was presented as a cystic space surrounded by a zone with higher echogenity. The authors recommended obligatory ultrasound study in the cases of pathological puerperium after cesarean section.

Anahler Kelimeler: Sezaryan ameliyatı, ultrasonografi, Puerperal komplikasyonlar

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From all the complications in the puerperal period 80% were due to cesarean section (1). The gradual increase of the abdominal interventions increased the absolute frequency of the complications in the uterus-endometritis, phlegmonas, partial of complete relaxation of the uterine suturae after a severe intrauterai infection (2,3,4), The surgical technique of correction of the uterine wall is of significance for the prophylaxis of this pathology (5), The ultrasound study is one of the

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ÖZET

Sezaryan ameliyatı sonrası uterus korpusunda bulunan puerperal komplikasyonlar için dokuz vaka, ultrason yöntemi aracılığıyla takip edilmiştir. Uterus involüsyonu ve sezaryan ameliyatından sonra uterus ta meydana gelen sakarda patolojik değişimler gösteren ultrasonografik belirtilere rastlanmıştır ve takip edilmiştir. Endometritiste şu belirtiler gözlenmiştir: uterus duvarında kendini hiperekojen oluşumlar biçiminde gösteren fibrinöz tabakalar, gazlı veya gazsız uterus genişlemesi, uterus sütürlerinde artan ekogenite ve/veya doku bozukluğu, ligatör bölgesinde belirgin gaz miktarı (belli sınırlan olmayan hipe-rekojenite). Hematomada sınırlar belirgindir ve ekonegatif içeriği olan iyi şekillenmiş kapsül mevcuttur. Ahselenme, daha yüksek ekogenitesi olan bölge ile çevrelenmiş kistik alan olarak kendini göstermiştir. Yazarlar, sezaryan ameliyatı sonrası özellikle patolojik puerperiumta sonuçlanan vakalarda ultrasonografik incelemelerin zorunlu olduğunu tavsiye etmektedirler.

Key Word*: Cesarean section, ultrasound, Puerperat complications

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most important methods for the clinical diagnosis of such a complications today (6).

The aim our study was to follow up the ultrasound phenomena indicating pathological changes in the involution of the uterus and the area of the SCAR after cesarean section,

MATERIAL AND METHODS

Nine cases of puerperal complications localized in the uterine body and directly connected with cesarean section were followed up. Evaluated were the method for correction of the uterine wall, the intrasurgical complications / loss of blood, lacerations /, the urgency of the intervention and its duration (Table 1).

For the present study was used the ultrasound apparatus TOSHIBA - SAL 38 AS.

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Table 1. Cases of puerperal complications after Cesarean section

Case	Sutura of uterine wall	Urgency	Duration	Intrasurgical complications	Puerperal complications
1	Classical	Planned			Endometritis
2	Classical	Primary	t T	Laceration	Hematoma
3	Two-floored	Primary	t	t Loss of blood	Endometritis
4	Classical	Secondary		-	Endometritis
5	Classical	Planned		-	Endometritis
5	Classical	Secondary	—	-	Partial relaxation of suture
7.	One-floored	Secondary		—	Hematoma
8.	Classical	Secondary	—	f Loss of blood	Endometritis
9.	Two-floored	Planned	—	Laceration	Endometritis

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Figure 1 Endometritis after cesarean section 7th day.

meter, represented as a hyperechogenic lined formations, thick to 2-3 mm (Figure 1).

2. Enlargement of the uterine cavity with or without presence of gas.

3. Sometimes, presence of liquid in the space behind the uterus.

4. Locally decreased echogenity in the area of the uterine sutura and or presence of defect of the tissue.

5. Appearance of significant quantities of gas in the region of the ligatures / hyperechogenity without clear delimitations.

Such findings had to be controlled daily and in dynamics with the ultrasound method (6,8).

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Figure 2 Hematoma after cesarean 6th day region of the suture.



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Figure 3 Endometritis after cesarean section-5th day, hematoma/phlegmone

RESULTS

With the ultrasound investigation were registered 5 endometrites, 3 hematomas, one of which suppurated and in one of the cases was observed partial relaxation of the uterine suturae in the region of the scar.

DISCUSSION

We observed the following signs of the endometritis, described also in the literature (6,7,8).

1. Fibrinöse platelets on the wall of the uterus, whose body had an enlarged anterior - posterior para-



Figure 4 State after cesarean section -5th region of the suture-norm.

The hematomas which we found in the area of the uterine scar were with clearly defined limits, well visible capsule and echo-negative content, which in the process of organization adapted a varied echodensity and in lack of infection gradually to sorbed. Usually the ultrasound picture of the hematomas was characterized with a prominence over the level of the scar with clear limits, while in the cases of suppuration the pathological findings were in the uterus without clear delineations and prominence (Figure 2). The suppuration was presented also as a cystic space, which was filled with a higher echogenity - sign indicating inflammation (Figure 3). The outlines of the zone were unclear and irregular (4).

D. Faustin et al. (1988) in study of 100 scars after cesarean section found in 29% presence of echo-negative areas between the anterior uterine wall on the level of the section and the posterior wall of the bladder, 4-5 days after the intervention, with were not hematomas and didn't need further ultrasound follow up.

We defined as a normal finding the presence of a zone of increased echogenity with clear limits and with not more than 10/10 mm., without deformation of the forth uterine wall and the cavity of the uterus result of the correction of the isthmus and sewing material (Figure 4).

The described ultrasound signs of pathological puerperium after cesarean lead to deficiencies of the scar, proved in the next gravidities.

In conclusion, we recommend the ultrasound study as an obligatory method of follow up, especially in the cases of pathological puerperium.

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