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GYNAE SPECTRUM

Dear Doctor,

Greetings from Micro Labs. We are happy to bring you "Gynae Spectrum", which contains latest and interesting news in the field of Obstetrics and Gynaecology.

This issue contains:

- Effect of new cross linked hyaluronan gel on quality of life of patients after deep infiltrating endometriosis surgery.
- Vulvar angiofibroma: a case report.
- Ultrasound Probes for Smartphone Cleared by FDA

Should you require any article or, medical information, please feel free to contact us medicalservices@microlabs.in

Looking forward to your valuable feedback.

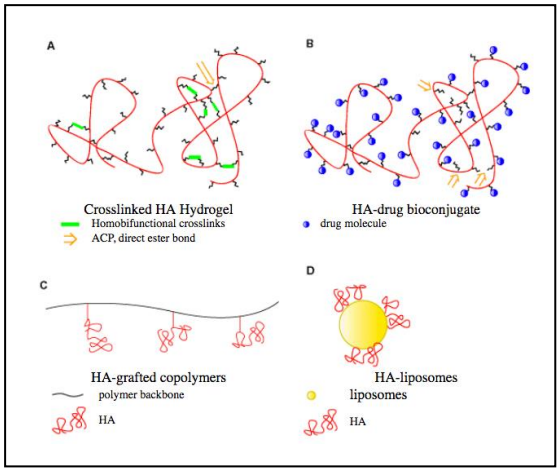
Best Regards,

Medical Team, Micro Labs Limited

1. Effect of new cross linked hyaluronan gel on quality of life of patients after deep infiltrating endometriosis surgery.

Endometriosis is the most common diseases of women during their reproductive period, with a prevalence of 7–10%. Lesions are typically observed in the peritoneal cavity, ovaries, and tubes.

It can also be found in the rectum, rectosigmoid colon, bladder, ureter, and other pelvic structures such as the uterine ligaments and vagina.



Patients with endometriosis usually have a low quality of life (QoL) due to dysmenorrhoea, dyspareunia, chronic pelvic pain, and infertility as a result of inflammation and adhesion formation.

Surgery is indicated in patients not controlled with medicines.

The surgical techniques vary from simple laparoscopic excision of endometrial foci to complex procedures including extensive adhesiolysis, ureterolysis, partial resection of bladder, ureter, and bowel to treat deep infiltrative endometriosis.

Aim of the current study is to evaluate the quality of life in patients who had undergone laparoscopic surgery due to Deep Infiltrating Endometriosis.

Methods:

A prospective, 1:1, randomised, placebo-controlled study involving 120 patients.

Patients included were those with age 18–45 years, undergoing laparoscopic surgery for suspicion of Deep Infiltrating Endometriosis, and having persistent pain unresponsive to any medical treatment.

Patients excluded were those with presence of an acute or severe infection, autoimmune disease, use of a systemic anti-inflammatory or hormonal drug at least three months before the planned surgery, patients with known/suspected hypersensitivity against hyaluronan or its derivatives, use of any anticoagulant agents, fibrin glue, or other antiadhesion agents were excluded.

Patients were randomly assigned to either the cross linked Hyaluronan gel (NCH) or control group in a 1:1 ratio through a computer-based programme.

A standardised laparoscopic approach was conducted consisting of removal of all the endometriotic foci. After hemostasis, 40 mL of NCH gel was administered into the peritoneal cavity of the intervention group. Control group received a 40 cc of sterile saline solution.
Patients were followed up in the third and sixth postoperative months and quality of life was assessed through Visual Analogue Scale (VAS), Endometriosis Health Profile (EHP-5), and Short Form for Mental and Physical Health (SF-12) questionnaires.

Results:

A statistically significant reduction in dysmenorrhoea, dyschezia, dyspareunia at 3rd and 6th month, and in VAS scores at 6th month in NCH gel group compared to the control group.

	Control group	NCH gel group	*p* Value	95% Confidence interval(CI)
Preoperative EHP-5	5.46 ± 3.13	7.83 ± 4.98	0.06	0.065–0.075
3rd month EHP-5	2.66 ± 1.56	1.93 ± 1.74	0.07	0.066–0.076
6th month EHP-5	2.16 ± 1.91	1.16 ± 1.51	**0.02**	**0.017–0.022**
Decrease in EHP-5	3.3 ± 3.19	6.6 ± 5.12	**0.009**	**0.007–0.011**
Preoperative SF 12 physical score	43.15 ± 10.11	39.99 ± 9.45	0.21	0.216–0.233
Preoperative SF 12 mental score	44.89 ± 9.31	40.38 ± 11.41	0.06	0.066–0.076
3rd month SF 12 physical score	49.34 ± 7.43	50.11 ± 11.16	0.18	0.182–0.197
3rd month SF 12 mental score	46.41 ± 7.93	50.43 ± 11.09	**0.005**	**0.004–0.006**
6th month SF 12 physical score	49.24 ± 7.89	51.92 ± 11.21	**0.004**	**0.002–0.004**
6th month SF 12 mental score	49.21 ± 7.07	51.55 ± 10.93	**0.01**	**0.010–0.014**
Decrease in SF 12 physical score	6.09 ± 10.02	11.93 ± 14.61	**0.03**	**0.027–0.034**
Decrease in SF 12 mental score	4.32 ± 11.29	11.17 ± 14.76	**0.01**	**0.015–0.020**

[§]SF 12: Short form-12 health survey for mental-physical health.
[¶]EHP-5: Endometriosis health profile-5.
[°]QoL: Quality of life.
Bold values indicates statistically significant ($p < 0.05$).

Post operative 6th-month EHP-5 scores were significantly lower (1.16 ± 1.51, p-value: .02) in NCH gel group.
Also, significantly higher scores of the postoperative 3rd month mental SF-12 and postoperative 6th month SF-12 physical and mental ratings (50.43 ± 11.09, 51. 92 ± 11.21, and 51.55 ± 10.93, respectively) found in NCH gel group.
No significant difference for preoperative EHP-5 and postoperative 3rd-month EHP-5 results etween the study groups was noted.

Discussion:

Endometriosis progresses with the formation of postoperative adhesions despite definitive radical excisional surgeries and hormonal therapies.
One of the major postoperative concerns is the high recurrence rate of the symptoms due to de novo pelvic adhesions that are associated with endometriosis-related pain.
Hyaluronan is a glycosaminoglycan that is found in connective tissues and extracellular matrix, has been thought to reduce postoperative adhesions, because of its biological functions in tissue repair. Hyaluronan has distinctive functions on scar-free healing by reducing inflammation and improving peritoneal re-epithelialization.
But fluid nature of Hyaluronan causes rapid degradation, and it cannot affect long enough to work as an adhesion barrier. For this reason, a new cross-linked hyaluronan (NCH) gel, with a higher viscosity than natural hyaluronan has been developed.

Studies have shown that cross linked Hyaluronan gel improves the quality of life post operatively.

Conclusion:

Cross linked Hyaluronan gel significantly improves post operative VAS scores and improves the quality of life at 6 months of post operatively compared to placebo, May be by reducing the formation of adhesions.

Reference:

Ekin M et al. The effect of new cross linked hyaluronan gel on quality of life of patients after deep infiltrating endometriosis surgery: a randomized controlled pilot study. J Obstet Gynaecol. 2020;1-6.

2. Vulvar angiofibroma: a case report.

Angiofibroma of the vulva is a rare benign mesenchymal lesion affecting middle-aged women and is usually treated by local excision.

It is histologically characterised by a spindle cell component and abundant small-to-medium sized thick-walled vessels

Differential diagnosis includes aggressive angiomyxoma, spindle cell lipoma, mammary type myofibroblastoma, angiomyofibroblastoma, fibrous tumours, perineuroma, fibroepithelial stromal polyp, and leiomyoma.

Current is a case of Vulvar angiofibroma.

Case presentation:

A 66-year-old women G1 P0 presented with a vulvar mass reaching the knees. She was asymptomatic and complained only of discomfort. The vulvar mass present for 15 years but with a progressively increased size in the last year.

Patient had no history of trauma, chronic infection or insect bite, and she had endured a caesarean section with a subsequent hysterectomy, 30 years before.

On examination, mass was painless, not tender, with no redness, and without signs of infection or abscess. It was a tumour of about 35 X 15 cm in size and 800 g in weight, and it extended from the border of the mons pubis and the right portion of the vulva up to the knees .

On palpation, the mass was mobile, it was not possible recognise the origin. In order to exclude a rare form of inguinal hernia and the intestinal content, the peristaltic activity was excluded.

Ultrasound evaluation showed the mass presented as an unrecognisable hetero-echoic structure with no doppler flow. The tumour markers CEA, CA-19.9 and CA-15.3 were normal; meanwhile, the CA-125 and AFP were slightly elevated.

Biopsy of the mass showed collagen stroma with small spindle cells being mixed with the adipose cells and the oedematous hypocellular areas. Small-to-medium sized thick-walled vessels were identified, and some of them presented with hyaline changes. The spindle cells were positively stained for progesterone receptor, oestrogen receptor, CD34, and Desmin. ki-67 was present in less than 1% of the cells. Based on the histology and according to the staining, the diagnosis was Cellular AngioFibroma. After histological diagnosis, the tumour was excised with local complete excision and sent for histopathology which confirmed the biopsy results.

On gross examination, mass was 30x12x7 cm and weighed 1,160 g. It was limited and surrounded by the smooth capsule, with yellowish-whitish elastic tissue with stiff and softer and oedematous areas.

On Microscopy , the tumour was composed of bland spindle-shaped cells, proliferating in dense fibrous stroma with thick collagen bundles. The spindle cells were uniform with short fusiform nuclei without atypia and without mitotic activity.

Immunochemistry showed strong diffuse staining for CD34, oestrogen receptor, progesterone receptor, weak focal staining for desmin, and negative for S-100.

Numerous blood vessels predominantly of medium-sized with thick walls, and some of them were reported hyalinised. There were also smaller vessels with 'hemangiopericytomatous' appearance.

Adipose tissue was prominent component of found throughout all the tumour, including the central areas. areas of prominent oedema were identified predominantly at the periphery of the tumour.

After surgery, the tumour was almost completely excised, although one focus of hyalinised thick-walled vessels in close proximity of the inked margin was identified. The skin was unaffected.

Discussion:

Cellular Angio Fibromas (CAF) are rare benign mesenchymal neoplasms, well-circumscribed, mostly asymptomatic, slow growing tumours.

Presence of oestrogen and progesterone receptors may play a key role in explaining the specific incidence distribution, and a complex aetiological process, similar to fibroids and endometriosis, may be involved

The current case patient suffered from this mass for more than 15 years with few or absent symptoms, the huge size of the mass is the biggest described until now, and the absent malignant transformation after 15 years.

Conclusion:

A case of cellular angiofibroma was managed with local excision. It has benign nature and the low risk of recurrence.

Reference:

Reder D, Kedan F, Garzon S, Haimovich S. Vulvar angiofibroma: a case report of a rare cause of huge vulvar mass [published online ahead of print, 2020 Jul 2]. J Obstet Gynaecol. 2020;1-2.

IN FOCUS

Ultrasound Probes for Smartphone Cleared by FDA

- A company has won FDA clearance for mobile ultrasound system. The product includes ultrasound probes that can interface with a clinician's own smartphone or tablet, and the app is used to display and manipulate live images produced by the probes.
- A special software allows clinicians to use the display of a smartphone or tablet to measure relevant anatomical markers with a to-the-pixel accuracy.
- It has numerous applications, particularly for treating patients in the field and also provides ultrasound capabilities that can be utilized on the way to the hospital.
- The velocity and complexity of modern medicine is becoming overwhelming, and putting the power of ultrasound into the pockets of clinicians so they can use it for real time diagnosis right at the bedside is liberating and transformative.

Reference:
Available at: https://www.medgadget.com/2020/02/vistascan-ultrasound-probes-for-your-smartphone-cleared-by-fda.html. Accessed on 11-07-2020.