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CASE REPORT

Vaginal synechiae in reproductive woman : A case report

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Abstract

***Background**: Vaginal synechiae is a condition which lips of labia minor was fused and covered the opening of vagina. The choice of treatment depends on the age group and the thickness. The cause is multifactorial, but during childhood it can be caused by hypoestrogenism or trauma to the vulvar, Labial adhesion is one of the most common paediatric gynaecologic problems. In the post-delivery hypo-estrogenic state of the female infant, the labia minora stick together in the midline. **Case Report**: A 23-year-old woman complained of having a different genitalia appearance compared to her friends. Patient had menarche at 13 years old, with regular cycles for 4-5 days and using 2-3 pad/day on her period. **Conclusion**: Vaginal synechiae in this patient maybe multifactorial, but during childhood it can be caused by hypoestrogenism during pregnancy or trauma to the vulvar, Labial adhesion is one of the most common paediatric gynaecologic problems. Synechiae incision was performed in this patient. Topical antibiotic and steroid maybe needed to promote healing and prevent recurrence.*

***Keywords:** vaginal synechiae; synechiae incision; labial fusion*

BACKGROUND

Vaginal synechiae, also known for labial fusion, vulvar fusion, labial adhesion, or labial agglutination, is a condition which lips of labia minor was fused and covered the opening of vagina with fleshy membrane. The term synechia of the labia is used to describe a superficial adhesion or fusion of the labia minora at their medial edges. Apart from the term synechia of the labia, labial synechia, labial adhesions, and vulval synechia are also found in the literature, which besides adhesions of the labia minora often include adhesion of the vulva margins (labial adhesion, labial agglutination, labial fusion and synechia vulvae).[1]

This condition can be found during childhood (less than 5 years old) or during the menopausal period. The cause is multifactorial, but during childhood it can be caused by hypoestrogenism or trauma to the vulvar area. For the aetiology, a primarily occurring superficial skin irritation in the physiological hormonal dormancy period , which may also occur in combination with a superficial vulvovaginitis, is assumed. [2,3]

Labial adhesion is one of the most common paediatric gynaecologic problems. In the post-delivery hypo-estrogenic state of the female infant, the labia minora stick together in the midline, usually from posterior forwards until only a small opening is left anteriorly through which urine is passed and presents as labial adhesion. These adhesions can sometimes bind the clitoris making it difficult to distinguish an opening. Other factors implicated include vaginitis,

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sexual assault resulting in injuries that heal with fibrosis.Though an innocent finding and a trivial problem, its importance is that it is frequently misdiagnosed as congenital absence of the vagina.[3]

In most cases, labial adhesions affect infants and young girls. This is called primary labial adhesions. They develop at least partly because there is a low level of estrogen in females before puberty. It's estimated that labial adhesions affect about 2% of female children before puberty (the time of sexual maturation). The condition may also affect women who have just given birth and women who have gone through menopause. This type is called secondary labial adhesions. Adhesions aren't as common among older women but they can happen.[2,3,4]

A hormone deficiency has not yet been detected in any clinical trials. Other authors prefer the topical oestrogen pre-treatment with subsequent manual separation or primary operative separation when the oestrogen therapy fails. As alternatives there are treatment schemes with topical corticosteroids (betamethasone 0.05%) or 0.1% gentamycin ointment. Other groups favour the immediate manual separation of the labia in the sense of a rapid solution to the problem or, respectively, surgical separation of the labia.[5,6]

Management of vaginal synechiae could be topical estrogen cream on the labial minora, or surgical adhesiolysis, depends on patient indication. Despite the mode of management, the recurrence of vaginal synechiae is 40%. If with this conservative treatment no results are achived there can be urinary tract infection and renal dysfunction.[3]

CASE REPORT

A 23-year-old woman complained of having a different genitalia appearance compared to her friends. Abdominal pain, abdominal enlargement and vaginal bleeding outside menstrual cycle were denied. Patient had no complaint on urination and defecation. History of vaginal discharge, fever or trauma were also denied. Patient had menarche at 13 years old, with regular cycles for 4-5 days and using 2-3 pad/day on her period. The patient has not married yet.

From gynaecology examination, external genitalia showed labia majora was found fused from above downwards in the midline, with a small pinhole opening near the urethra. Labia minora and vaginal introitus difficult to visualized. Vital sign was normal. Ultrasound examination revealed that uterus within normal limit. The patient was diagnosed with labial adhesion.

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Figure 1: Gynaecology examination showed there was only a very small pinhole opening near the urethra.

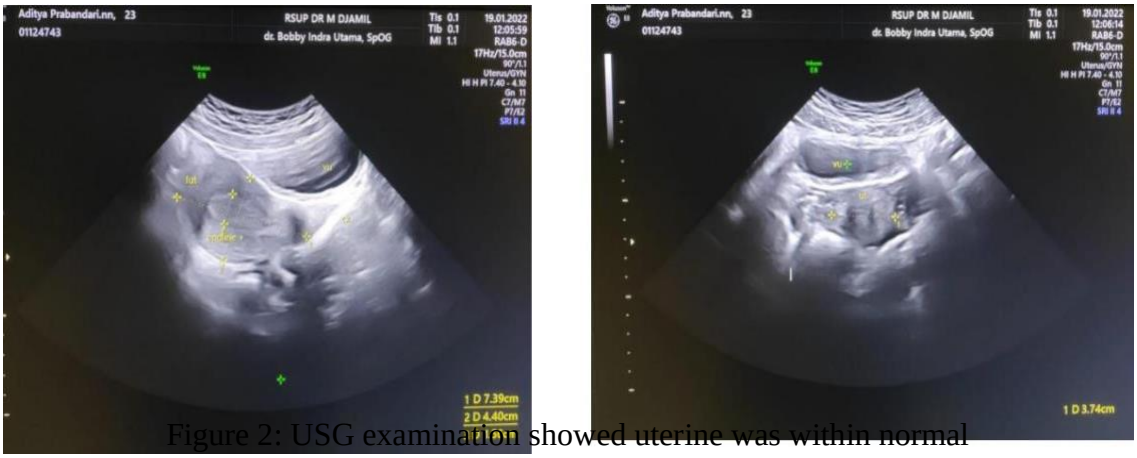

Figure 2: USG examination showed uterine was within normal limit

Synechiae incision was selected surgical management for this patient. Operation was performed under spinal anaesthesia. After aseptic procedure, sondage is inserted into vagina. Synechiae incision was carried afterward.

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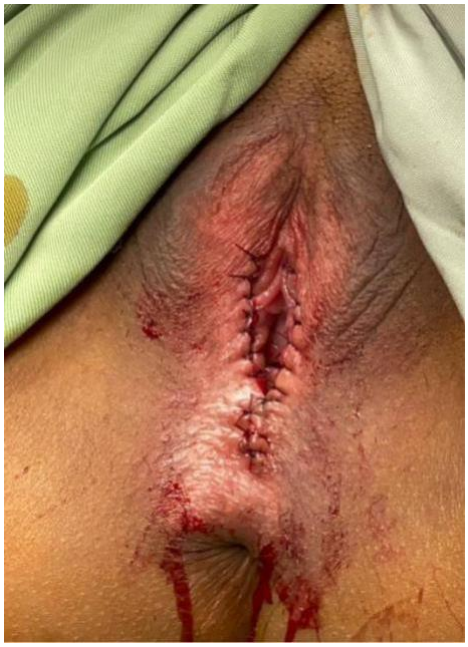

Figure 3: Synechiae incision is performed in this patient

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DISCUSSION

This case presents a 23-year -old woman with vaginal synechiae. This patient complained of having a different genitalia appearance compared to her friends. Vaginal synechiae is a condition with a partial or complete adherence of labial minora caused by lips of labia minor was fused and covered the opening of vagina with fleshy membrane. The membrane usually covers the vaginal opening completely and leaving a small gap at the front, which let the urine and menstrual blood pass through. This condition is commonly found in pre-pubertal girls, approximately 0,6-5% of pre-pubertal girls, with peak incidence around 3 percent in the second year of life.[1]

Most patient is generally asymptomatic. Some patients come with complain of urine pooling in vagina on voiding followed by leaking from the vaginal area upon standing after voiding, or a shift in urine stream direction. Complete labial fusion may occasionally be mistaken for complete atresia of, or a membrane occluding, the vagina. Occasionally, vaginal Synechiae may be noted in children with urinary tract or vaginal infection. Asymptomatic bacteria can develop in about 20% girls, and up to 40% girls experience symptomatic urinary tract infections. however, failed to demonstrate any statistical difference between the serum estrogen levels in infants with and without vaginal Synechiae. Vaginal Synechiae has also been reported secondary to childhood sexual abuse and may be related to consequential lacerations or hematoma formation. The use of nappies has also been incriminated as a cause. Vaginal Synechiae has also been reported in reproductive age women in the immediate postpartum period and following female circumcision, lichen sclerosis, genital herpes, diabetes, pemphigoid, caustic vaginitis, and severe monilial infection.[2,3]

Abnormalities of the internal genitalia and the urinary system are not associated with vaginal Synechiae. Treatment is not warranted for asymptomatic vaginal Synechiae. Reassurance of the parents and periodic observation usually suffice. Spontaneous resolution has been observed at the onset of puberty and has been correlated with the rise in the estrogen level. Topical application of estrogen has been recommended in symptomatic patients with success rates varying from 47 to 100 %. 68 % success with use of 0.05 % betamethasone cream and a 23 % recurrence in a maximal follow-up period of 24 months.[4]

Vaginal Synechiae presenting as a double urinary stream has not been reported in the English medical literature. We would also like to emphasize the importance of complete clinical examination in all cases before subjecting the child to unnecessary investigations. This child had a problem which perplexed the parents, but proper clinical examination led to instant diagnosis and management. The prognosis for girls with vaginal Synechiae is excellent. The condition may even resolve spontaneously if left untreated. However, the psychologic impact on the parents of the girl child may be significant and calls for counseling and reassurance.[5]

USG examination showed that uterine is within normal limit. This case needs to be differentiated with other different diagnosis, especially when it occurs in pre-pubertal or pubertal age. The different diagnosis includes congenital anomalies, vaginal atresia, Gartner's duct cyst, ambiguous genitalia, and imperforate hymen in children, or hematometrocolpos in severe cases. Other recommended examination are urine culture and vaginal swab.[2]

Synechiae incision was selected surgical management for this patient. It is important for physician to mentioned that if this condition is asymptomatic, there is no requirement for treatment and watchful waiting is recommended. Treatment is maybe needed to avoid symptom.[4,5] Medical and surgical management were mentioned in various literature as the management for vaginal synechiae. The choice of treatment depends on age group and the type

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of adhesion.[2,8,10]

Manual separation in the form of steady, gentle pressure to stretch the labia apart with or without application of a local anesthetic has been recommended. Application of local anesthetic allows the use of a local probe to facilitate the job. Local ooze may be present, but is never severe enough to initiate any hemostatic measure. Local application of emollients for a few days after the maneuver allows time for reepithelialization and prevents reformation of vaginal Synechiae. The main criticism behind manual separation is physical and emotional trauma to the patient. Surgical lysis under general anesthesia may be required for dense and fibrous adhesions. However, surgery may result in the development of fibrous tissue and thickened adhesions. Recurrence can happen after surgery. We need an evaluation postoperatively and therapy to the underlying cause of the labial synechia. On recurrent cases, the use of amniotic membrane grafting is recommended.[2,9]

Topical estrogen is selected management indicated for superficial vaginal synechiae.[1,10] Topical estrogen could also be combined with steroid cream. Conjugated estrogen cream or estradiol vaginal cream (0.01%) applied to the adhesions 1-2 times daily for several weeks until the adhesion resolve This topical treatment is applied not more than 6 weeks considering the side effects. This side effects are local irritations, vulvar pigmentation, and breast enlargement. [1,7,11]

Surgical adhesiolysis is indicated for patient in post pubertal group as the synechiae found mostly thick and dense. Surgical adhesiolysis is also indicated when adhesion didn't respond with medical management. Surgical management come with the side effects such as formation of fibrous tissue and thicken the adhesions.[4,6] Post operative care, include antibiotic and topical estrogen, is needed to promote healing, and prevent recurrence.[2,8]

The recurrence rate of vaginal synechiae is around 40%. Adhesion that recurs after surgery is usually denser and mostly respond with medical management.[1]

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CONCLUSION

Vaginal synechiae is very uncommon in reproductive age due to abundance of estrogen level. Synechiae in this patient maybe caused by post-delivery hypo-estrogenic state of the female infant, the labia minora stick together in the midline. Patient was treated with synechiae incision due to thickness of the synechiae. Topical antibiotic and steroid maybe needed for this patient to promote healing, and prevent recurrence.

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