Uterine Dimensions and Primary Dysmenorrhea
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ABSTRACT:
Background: Dysmenorrhea leads to many lost working hours.

Objective: Study correlation between uterine size, utero-cervical angle dysmenorrhea severity.

Material Methods: Perspective pilot study was carried out by clinical uterine size, attitude, uterocervical angle

Results: Of 50 study subjects, 9 had very severe pain, 6 had small size uterus. Of 8 with small size uterus, 6 had very severe, 2 severe pain. Of 41 with normal size uterus 48.78% had moderate pain, 43.90% severe, 4.8% very severe pain. Of 8 women with UCL of 6-6.5cms., 6 very severe pain, 2 severe. All with moderate pain, had normal size uterus, 66% with very severe pain, had small size uterus. When reverse was compared, 16% with small sized uterus 75% described pain very severe, 25% severe, one with multiparous sized uterus described moderate pain. Two with very severe pain had acutely anteverted uterus, cochleate with pinpoint os making sounding difficult. Recent studies are scarce.

Conclusion: Young women with dysmenorrhea should be provided with proper information to have lifestyle, therapy if required to help themselves, to cope with dysmenorrhea.

Background
Dysmenorrhea is the most common of all gynaecologic complaints. Primary dysmenorrhea is the most common menstrual disorder occurring in 30 to 90% of young women, though an accurate incidence or prevalence of the disorder is not known. Calis et al4 opine that because primary dysmenorrhea is menstrual pain observed in the absence of any identifiable pelvic lesion and secondary dysmenorrhea is due to the presence of some pelvic disease/diseases, secondary is better understood and presents somewhat less of a problem than is presently true for the primary.

Though during the last some years, substantial progress has been made towards understanding the nature, however it still manages to confound clinicians globally. It is the greatest single cause of lost working hours and school days among young women each month, with an excess of 140 million hours estimated to be lost annually.5

Posture and gravity are factors that influence the position of the uterus. The relationship between the length of the body of the uterus and that of the cervix likewise varies widely. When viewed from the side, the adult uterus is bent forwards on itself in an attitude of anteflexion. The bend is situated about the level of the internal os. In addition, the axis of the cervix is inclined forwards at an angle of approximately 90 degrees to the axis of the vagina, in an attitude of anteversion. When a woman is standing, the cavity of the uterus is more horizontal than vertical. The degree of anteflexion and anteversion is influenced by the state of adjacent organs also. A full bladder for example, rotates the uterus backwards and also reduces anteflexion.6 This could be the reason that uterine position itself may be responsible for dysmenorrhea.

Objectives:
Present pilot study was conducted to study the correlation between the clinical uterine size, utero-cervical angle with dysmenorrhea.

Material Methods
Present perspective study was carried out in the department of Obstetrics gynaecology, of a referral rural institute in young women with primary dysmenorrhea.

Informed consent was taken from all the study subjects. Of all the cases with dysmenorrhea, nulliparous women without any palpable pathology were the study subjects.

Women attending the Obstetrics Gynaecology outpatient with complaints of significant primary dysmenorrhea were subjected to a thorough pelvic examination. Uterine sounding was done and the uterocervical angle determined.
after ruling out any local infection or pelvic pathology.

Fifty nulliparous women of 18 to 30 years of age who had presented with the complaints of significant dysmenorrhoea were interviewed. Physical examination was done along with thorough pelvic examination. Patients with obvious pelvic pathology which could be responsible for dysmenorrhoea were excluded. Uterine sounding was done after excluding local pathology also. The utero-cervical length was determined by sounding and also utero cervical and utero vaginal angles were recorded to note the position and flexion attitude of the uterus.

Results:

While describing the intensity of pain, 42% of the women described the pain as moderate, 40% as severe and 18% of the women described the pain very severe. Most of the women between 18 to 23 yrs described the pain as moderate and severe (56%) compared to 22% of 24-29 yrs. Of all women with very severe pain 66.67% were of 24-29 yrs and 33.33 % of 18-23 yrs.

Of 9 women with very severe pain, 6 had clinically small size uterus and also of 8 women with clinically small size uterus, 6 had very severe and 2 severe pain. Of 41 women with normal sized uterus 20(48.78%) had moderate pain, 18(43.90%) severe and 2 (4.8%) very severe pain. Only one woman had multiparous size uterus and she described her pain as moderate (Table I).

Of 16 Women of 41-45kgs, 14 (87.5%) had a normal sized uterus, of which 10(71.42%) described pain as severe and 4(28.5%) moderate. Remaining 2 women had small size uterus and described pain as severe. Of 17 women of 51-55kg weight 15 (88.2%) had normal size uterus, of which 7 (46.6%) described their pain as moderate, 6 (40%) severe and 2 (13.33%) very severe. One (6.6%) woman had small size uterus and she described her pain as very severe and one woman (6.6%) who had multiparous size uterus described her pain as mild (Table I).

Of 40 women of 21-26years 35 (87.5%) had uterocervical length (UCL) of 7-7.5 cms, 19 (54.28%) had pain as moderate, 13 (37.14%) severe and 3 (8.5%) very severe. All 4 women with UCL of 6-6.5cms had very severe pain and one with UCL of 8cms reported moderate (Table II). Of 16 women between 41-45kgs, 14 (87.5%) with UCL of 7-7.5cms, 10 (71.42%) had severe pain and 4 (28.5%) moderate. The remaining 2 of 16 (12.5%) with UCL of 6-6.5cms reported pain as severe. Of the total 8 women with UCL of 6-6.5cms, 6 (80%) described very severe pain, 2 (20%) as severe (Table II).

Two women described pain as very severe had acutely anteverted uterus, almost cochleate with pinpoint os making sounding difficult.

Discussion:

Interest in dysmenorrhoea dates back to Hippocrates, who thought that cervical obstruction and a consequent stagnation of menstrual blood were responsible for the development of dysmenorrhoea. The number of casual theories for dysmenorrhoea is matched only by that of proposed treatments. Over the years a variety of anatomic, neurogenic, hormonal and psychogenic explanations have been offered, none of which have adequately explained its natural history. Clinical obstruction due to any cause has been implicated in dysmenorrhoea. The decrease in dysmenorrhoea after term pregnancy has been attributed to the destruction of nerve endings which is associated with stretching of the uterine musculature. Hysterographic studies in dysmenorrhoeic women compared to normal women have not shown any significant narrowing of the cervical canal. During dysmenorrhoeic menstruation with excessive myometrial contractility, reduction in arterial blood flow can be significant enough to cause ischaemia which causes pain. Also Continual generation of small amount of Prostaglandins at the site of injury, of the denuding endometrial layer, sensitizes the nerves so mechanical stimulation or release of mediators such as bradykinin and histamine can cause pain. Rogers and Rogers reported that the uterus is thicker and the endometrium is thinner in patients with severe PD, as compared to the healthy controls.

Weight was found to have no significant correlation with either severity or size 33% of 35-40 kg, describing pain as severe and 44% pain as severe in the 51-55 kg (p=0.10 insignificant). 82% of the women had a UCL of 7-7.5cms, 16% had UCL of 6-6.5 cms and only 2% of the women had UCL between 8-8.5 cms. It was found that 95% of women describing pain as moderate had UCL between 7-7.5 cms and only 5% had UCL of 8-8.5cms. 90% of women with severe pain had...
UCL of 7-7.5cms and 10% had UCL of 6-6.5cms, 66% of women with very severe pain had UCL of 6-6.5cms and 33.33% had UCL of 7-7.5cms. Of 16% women with UCL of 6-6.5 cms, 75% described pain as severe, 25% as very severe, of 82% women with UCL of 7-7.5cms., 48.7% described pain as moderate, 43.9% as severe and 7.3% as very severe.

When the uterine size were adjudged on clinical examination, 82% of women were found to have a normal size uterus, 16% small size uterus and only one (2%) had a multiparous size uterus. All women with moderate pain, had a clinically normal size uterus, only 10% of women who had severe pain had a clinically small size uterus compared to 66% of women with very severe pain, who had a clinically small sized uterus (p=0.042 significant). When the reverse was compared, of 82% of women with clinically normal size uterus 48.7% had moderate pain, 43.9% as severe and 7.3% as very severe. Of 16% women with a small sized uterus 75% described pain as very severe and 25% as severe and one woman with multiparous sized uterus described her pain as moderate.

Two women described pain as very severe had acutely anteverted uterus, almost cochleate with pinpoint os making sounding difficult. Recent studies of this nature are scarce. Delayed passage of the menstrual discharge owing to cervical stenosis or to acute uterine anteflexion or retroflexion, theoretically might result in the formation of clots and in distension of the uterine cavity. This stimulus could cause increased uterine motility and muscular contraction, perceived as cramps. In the present analysis though majority of the women had a clinically normal sized uterus, the relationship between severity of pain, with 66% women, with severe pain having a clinically small sized uterus, merits further studies. Studies comparing uterine size on clinical examination and sensitive investigations like ultrasonography especially in women with severe dysmenorrhea and modality of relief.

REFERENCES:-
Table 2

Age, Weight, Utero-Cervical Length and Severity of Dysmenorrhoea

<table>
<thead>
<tr>
<th>Dysmenorrhea</th>
<th>Utero-Cervical Length (UCL)</th>
<th>Age in years</th>
<th>Weight in kgs</th>
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<tr>
<td>Moderate (21)</td>
<td>6-6.5</td>
<td>18-20</td>
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<td>7-7.5</td>
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<td>8-8.5</td>
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<td>Total</td>
<td>56-60</td>
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<td>Severe (20)</td>
<td>6-6.5</td>
<td>18-20</td>
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<td>Total</td>
<td>51-55</td>
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<td>Very severe (9)</td>
<td>6-6.5</td>
<td>18-20</td>
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<td>Total</td>
<td>56-60</td>
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Amylin is co-secreted with insulin by the pancreatic β cell. Its centrally mediated metabolic effects include modulation of gastric emptying, suppression of inappropriate glucagon secretion and decreased food intake. Pramlintide, an injectable amylin analogue, is approved by the US Food and Drug Administration to supplement meal-time insulin therapy in type 1 and 2 diabetes.

Diabetes, obesity and metabolism

Unlike β-adrenergic blockers (ie, metoprolol), which reduce stroke volume, cardiac output, and blood pressure in the short term, ivabradine increases stroke volume, preserves cardiac output, and blood pressure while reducing heart rate from the start of its administration. This makes ivabradine complementary to β-blocker therapy and has a favorable impact on cardiac parameters. These advantages are translated into long-term clinical benefits.