



An Update on Diagnosis and Management of Adolescent Endometriosis - A Short Communication

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Endometriosis is a gynaecological disorder in which endometrium like tissue grows in locations outside of the uterus primarily in the peritoneal cavity. Symptoms include pelvic pain, dysmenorrhea, menorrhagia and infertility [1,2]. The recognition and management of endometriosis in the adolescent patient is challenging. Endometriosis is encountered in up to 73% of adolescents and young adults with a history of severe and primary dysmenorrhea [3]. Strong clinical suspicion for Endometriosis needs to be maintained in the adolescent who suffers from acyclic pain, along with family history of Endometriosis and personal history of atopic disease along with absenteeism from school and lack of participation in daily activities. Risk factors are presence of an obstructive Mullerian anomaly, a family history of Endometriosis and conditions that prolong exposure to endogenous and exogenous estrogens [4]. Further early life physical and sexual abuses In child hood or adolescence was reported by Harms., *et al*, where 3494 cases of laparoscopically confirmed endometriosis were diagnosed during 24yr of follow up, severity, chronicity and accumulation of type of abuse were associated with greater risk. Understanding the mechanisms underlying these relations may better define the biologic impacts of abuse and the related pathophysiology of Endometriosis [5]. Endometriotic implants in the adolescent tend to be more atypical, appearing red flame like, clear/polypoid, or vesicular. An increasing body of literature suggests that advanced stage Endometriosis (Revised scoring system of the American Society of Reproductive Medicine Stage III or IV) and deeply invasive Endometriosis are relatively common in adolescents [6]. As per Gallagher, *et al*. endometriosis is associated with significantly worse quality of life (Qol) in young women with Endometriosis compared to unaffected peers. Earlier menarche was associated with poorer physical health-related Qol among cases, whereas severe pelvic pain was associated with both poorer physical and mental health related Qol among cases [7]. Combined estrogen –progestin contracep-

tives are the 1st line of treatment when non steroidal inflammatory drugs (NSAIDS) are not effective [8]. Prior use of COC's for dysmenorrhea has been shown in a cohort of approximately 1000 women to be a surrogate marker of severe endometriosis [9]. Although there is a lack of evidence to support a cause effect relationship, this implies that COC's treatment for severe dysmenorrhea may not be satisfactory. There is a need for early diagnosis of endometriosis and prevention of disease progression to improve quality of life and preserve fertility. No studies where dienogest was used solely to treat adolescent endometriosis are available, but several studies where Gn RH-a with hormone therapy (HT) add back were used. Failure of empiric treatment may warrant diagnostic laparoscopy, that gives a concomitant opportunity for treatment via excision of endometriosis. Endometriosis tends to recur more often in adolescents than compared to adults and the role of postoperative medical therapy for the suppression of endometriosis on future fertility is limited but overall assuring. More research is needed regarding the benefits of the routine use of hypoestrogenic and other hormonal agents in the prevention of disease progression and long term sequelae in adolescents with endometriosis [6]. In a recent RCT, 51 adolescents and young women on Gonadotropin releasing hormone agonist (Gn RH-a) therapy (leuprolide depot 11.25 mg injection every 3mths for endometriosis were randomly assigned to hormone therapy (HT) add back with norethindrone acetate (NETA) (5mg/day) + conjugated equine estrogens (CEE) (0.625mg/day) or NETA + placebo for 12mths. The HT add back maintained bone health and Qol for the duration of the study. Combination Therapy with NETA and CEE was more effective for increasing total body bone mineral content, density and lean mass than monotherapy with NETA[10]. Despite side effects, participants related Gn RH-a plus addback was more effective hormonal medication especially when 2-drug add back was given [11]. These findings got substantiated in another RCT where NETA + CEE was more effective than NETA alone for

improving health related QoI in 50 adolescents aged 15-22 years with surgically confirmed endometriosis [11]. As far as surgery is concerned no consensus is there whether surgery should be avoided as much as possible to prevent multiple operations in the long term, or surgical treatment should be considered at an early stage before more severe lesions develop. More research is needed which approach would offer a better long term outcome [12].

The ACOG joint committee gave a report on dysmenorrheal and Endometriosis In the Adolescent where they said most adolescent girls experiencing dysmenorrhea have primary dysmenorrheal defined as painful menstruation in the absence of pelvic pathology. When the patients history suggest primary dysmenorrheal within 3-6 mths of therapy initiation, her obstertician-gynaecologist should investigate the possible secondary causes and for treatment adherence. Secondary dysmenorrhea refers to a painful menses due to pelvic pathology or recognized medical condition. Endometriosis should be considered in patients with persistent, clinically significant dysmenorrhea despite treatment with hormonal agents and NSAIDS, particularly if no other etiology of chronic pelvic pain or secondary dysmenorrhea has been identified based on history, physical examination has been identified. Appearance of endometriosis may be different in adolescent than in adult woman. The appearance of endometriosis may be different where lesions appear typically clear or red and may be difficult to identify for gynaecologists unfamiliar with endometriosis in adolescents. Endometriosis in adolescents is considered a chronic disease and potential for progression is there if left untreated. Goals of therapy include symptom relief, suppression of disease progression, and protection of future fertility Therapy needs to be individualized, and obstetrician- gynaecologists should consider patient choice, need for conception, contraindications of hormone use, and potential adverse effects and counsel both the adolescent and her family on treatment options [13].

Over the last decade much effort has been laid on examining the causality between multiple chronic diagnosis in female adults. Many reports showed increased prevalence of fibromyalgia, interstitial cystitis, irritable bowel syndrome and migraine in patients with endometriosis as compared to their counterparts without endometriosis [15]. Recently Miller, *et al.* reported that adolescents with Endometriosis are more likely to experience migraine than those without Endometriosis. A linear relationship exists between the migraine pain severity and the odds of Endometriosis. Because of strong correlation, patients who present with either condition should be screened for comorbidity to maximize the benefits of care [15]. Yunker, *et al.* emphasized how co-occurrence of chronic pain disorders in adolescents suggests early pain programming

and possible timing for intervention [16]. Although he pointed on some study limitations like it being a longitudinal data, identified control group that were assumed to have endometriosis based on a lack of laparoscopy instead of a negative one. It is possible that many of these patients may land in endometriosis, and cases were recruited just on self reporting. Anyhow it highlights how earlier health impact needs to be made in these adolescents [16].

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