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Pregnancy-Related Low Back Pain:

Along-standing debate in pregnancy care is whether LBP is an inevitable process and allowed to resolve spontaneously or perhaps could be prevented. This article reviews the clinical presentation and practical treatment and management strategies of LBP during pregnancy for patients.

LBP (LBP) and posterior pelvic pain (PPP) were previously considered the same. Past research grouped these two conditions under a classification of "LBP." However, they have been recently discretely described and measured. It is now evident that they require individual consideration for diagnosis and management.

LBP represents a common pathophysiological process of pregnancy with a 9-month prevalence rate of approximately 50%. Despite an abundance of literature, LBP during pregnancy remains poorly understood. Current treatments are often ineffective, leaving physicians perplexed about how to manage patient symptoms.

The general thinking is that nothing can be done to alleviate these problems short of the mother completing the pregnancy and to simply allow these symptoms to resolve spontaneously. But with careful diagnosis, appropriate treatment is possible.

Clinical Presentation

LBP during pregnancy has been characterized by the time of greatest pain intensity and location of pain. The features of pregnancy-related LBP compared to non-pregnancy LBP differ. Compared to 23.6% of the general population that endures severe LBP, one-third of all pregnant women describe severe LBP sometime during their preg-

nancy. *Mantle et al* indicated the 2nd and early-3rd trimesters are the periods when backache is most prevalent. Several studies also reported that the evening hours were apparently more painful than the rest of the day. Approximately 67% of pregnant women suffer from night discomfort or backache and 36% have night backache so severe it wakes them from sleep.

Pattern of pain intensity, or location, also is crucial in determining the origin of back pain. *Ostgaard et al* differentiated LBP into pain originating from the posterior pelvic region (distal and lateral to L5) or lower lumbar area (LP). It has been reported that PPP occurs 2 to 4 times as frequently as the lumbar type (LP). Unlike lumbar pain, it has been directly correlated to both pain intensity and sick leave, and therefore believed to be more incapacitating. While women with LBA pains typically remains constant throughout pregnancy, the prevalence of PPP increases during the middle and late stages of pregnancy.

Physical Examination/Signs

Assessments of LBP during pregnancy include the visual analog scale and body charts/pain diagrams but they may be inadequate in distinguishing between lumbar and posterior pelvic pain. The neurological examination usually is unremarkable for both types of pain with negative dural tension signs including the straight leg raise.

The lumbar pain (LP) during pregnancy is similar to the clinical presentation of patients without pregnancy and is relatively easier to diagnose than pelvic pain (PPP). LP tends to be more chronic and intense postpartum. Pain on palpation of paraspinal muscles, hypomobility and weakness in the back signifies muscle insufficiency in

the lumbar spine. There could also be decreased range of motion of lumbar spine, with pain reproduced on lumbar flexion.

PPP typically presents differently from lumbar pain (LP) and tends to be acute, pregnancy-induced, and uncommon among the non-pregnant population. With no additional trauma or stain, mild PPP generally resolves 3 months postpartum. Clinically, patients present with backache and a "deep, boring, ill-defined pain that is poorly localized" and radiates down the posterolateral thigh as far as the calf. *Sturesson et al* suggested that the large innervation of the sacroiliac joint (L4-S1) contributes to the referred pain experienced by pregnant women. While there are numerous tests for assessing sacroiliac joint pathology, research has indicated 3 tests with superior sensitivity and efficacy; they are "Patrick's Fabere test, Menell's test, and the Posterior Pelvic Pain Provocation test."

Differential Diagnosis

Pregnancy-related LBP can be defined as any type of idiopathic pain arising between the 12th rib and the gluteal folds during the course of the pregnancy. As such, this does not include any situation in which the pain can be attributed to a specific pathological condition, such as a disk herniation that arises either before or during the pregnancy. It is important for to consider other disease pathologies, some of which are listed in Table 1, that mimic the symptoms of "primary" LBP associated with pregnancy.

As previously stated, LBP with radiation into the buttocks and legs is a common problem during pregnancy. However, LBP must be carefully differentiated from radicular and other neurologic symptoms. True sciatica is rarely diagnosed in the pregnant population. Posterior facet syndrome can present with pain radiation down the posterior thigh and mimic radicular pain. Another type of radiculopathy, meralgia

Table 1:

Coccydynia
Spontaneous abortion
Osteomyelitis
Osteoarthritis
Cancer
Urinary tract infections
Rheumatoid
Ankylosing spondylitis

paresthetica, follows the distribution of the lateral femoral cutaneous nerve and may be confused with referred pain symptoms experienced with LBP. Meralgia paresthetica is associated with severe pain, numbness, tingling, hypesthesia, or burning sensation down the anterolateral aspect of the thigh.

Management/Treatment

One of the most common treatment interventions for LBP is physiotherapy. *Ostgaard et al* studied the relationship between sick leave and prepartum back education and training classes. There was a 12% decrease in sick leave time among pregnant women enrolled in an individualized back education and training program for both PPP and LP pain types. As a precaution, the physiotherapy routine should be designed and monitored by women's health physiotherapists, or health care provider who specializes in women's health. This is because, improper management of special populations, such as expectant women with PPP, may lead to worsening of the condition. For example, PPP sufferers should refrain from stair climbing, standing on one leg, extreme motion at the hips and back, and other positions that overload the pelvis. Those who present with both lumbar and posterior pelvic pain symptoms should avoid back-strengthening exercises until the posterior pelvic symptoms resolve; these symptoms may worsen if lumbar strengthening exercises are performed.

In addition to physiotherapy, exercises to alleviate mild LBP may include walking, swimming, or bicycling at low to moderate intensities. Deep abdominal toning is recommended which generate less stress on back muscles, but abdominal crunches and straight leg raises are contraindicated. It also should be noted that the goal of exercise during pregnancy is to improve or maintain muscle tone and not to control weight gain or to correct posture. Hypertension, diabetes mellitus, history of premature labor, placenta previa, threatened abortion are all contraindications to exercise during pregnancy.

Other supplemental therapies also are available for women with pelvic pain and may diminish the need for medications. *Berg et al* reported 71% of patients that suffered from severe LBP experienced some relief with a trochanteric belt, which provides support to the pelvic girdle, but this belt may compress the abdomen and cause discomfort. Sacroiliac belts, in contrast, do not compress the abdomen and 82% of women with posterior pelvic pain reported some pain relief with these belts.

Prevention

Prevention of LBP is often associated to how one manages her pregnancy during this period. Maximum working capacity is expected during pregnancy in some career environments, and ignoring the additional responsibility of pregnancy by employers or the employees themselves only exacerbates the symptoms. Pain intensity during pregnancy has been positively associated with duration of pain postpartum. Women who did not take breaks at work report experiencing back pain symptoms 6 years postpartum. *Wergeland and Strand* found that women felt more at ease during pregnancy if they controlled their own work pace.

Prepartum physiotherapy management and exercises have also been considered a component of LBP prevention. Women who are more physically fit prepartum appear to have a reduced risk of developing LP and PPP during pregnancy. Exercise regimens as little as 45 total minutes per week have been correlated with reduced lumbar pain symptoms. Expectant women with history of PPP and/or LP felt more positive and less fearful of their pregnancy when they know that help and support is available from qualified physiotherapists in the event when symptoms flare up.

Conclusion

Pregnancy, for good reason, is considered by many a fragile time of a woman's life. Health care providers use special precautionary measures to ensure the health of the growing fetus and the mother. For this reason, they are often hesitant to address the symptoms of LBP, which are widespread and often debilitating. But if unaddressed, these symptoms can persist during pregnancy and severely affect the lifestyle and health of the patient postpartum. It is therefore vital that health care providers and patients understand the underlying issues of LBP, including appropriate prevention and treatment options, to allow for a pain-free

and stress-free pregnancy.

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