

BACKACHE IN PREGNANCY

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This study was performed to determine the frequency of backache, its causes and to assess the efficacy of various treatment modalities used for the management of backache in pregnancy. The location of the study was outpatient department of obstetric services, Jinnah Hospital, Lahore. Patients attended to the antenatal OPD during February 2004 were asked about history of backache. A further information was obtained from patients who had history of backache. A total 918 ladies with complete data were recruited. Four hundred and thirty-two (47.05%) reported one or more significant episodes of back pain during their pregnancy. Of these 96 (22.22%) noted ongoing back pain at the time they became pregnant leaving a true incidence rate of 36.60%. Twenty-one patients (4.86%) were less than 20 years, 407 (94.21%) were in between 20–40 years of age and 4 (0.92%) were above 40 years. Eighteen patients (4.16%) were less than 50kg, 345 (79.86%) had weight in between 50-70 kg and 69 (15.97%) were more than 70kg. Seventy-eight patients (18.05%) were primigravida, 292 (67.59%) were multigravida and 62 (14.35%) were grand multigravida. Three hundred and twenty-nine patients (76.15%) were delivered vaginally, 5 (1.15%) had instrumental deliveries and 98 (22.68%) had lower segment caesarean section. In the later group, spinal anaesthesia was given in 60 (61.22%), general anaesthesia in 34 (34.69%) and epidural anaesthesia in 4 patients (4.08%). Ninety-six patients (22.22%) had backache before pregnancy and 336 (77.77%) had it during pregnancy. No treatment was taken in 23 patients (5.32%), rest in 297 (68.75%), analgesics in 106 (24.52%) and massage in 6 (1.38%) patients. Subjective relief was up to 50.0% with rest, 75.0% with analgesics and up to 50.0% with massage. Backache was found to be common in pregnancy. About one quarter of all pregnant women experience backache. The most common cause of backache in pregnancy is odd posture, heavy work and weight lifting. About half of the patients took treatment mainly in the form of rest and analgesia. Chiropractic practice is also common in pregnancy and it gives some relief as well. Although, backache is so common in pregnancy still none of the patients had any concept about posture and exercise. It is advised that patients should be given special advice regarding posture and exercises.

Backache is a common symptom in women of childbearing age. As many as half of women reporting back pain at some stage during pregnancy.^{1,2,3} It is perhaps not surprising that many obstetricians dismiss it as unimportant, however backache in pregnancy is a substantial problem. Many women are helped by understanding the likely cause of the pain and by advice on prevention and management.

There seems to be little difference in the prevalence of backache between pregnant and non-pregnant women.^{3,4} In one study of Swedish women questioned between the ages of 38 and 64, two thirds reported experiencing back pain, and only a minority said that it had started in pregnancy.^{3,4} However, backache experienced during pregnancy is more severe and disabling and present for a greater proportion of the time.¹ About 10% of women may be prevented by it from working,² and over a third report that it interferes with daily life.³

Though non-specific low back pain (radiating classically to buttocks and thighs) is experienced by both pregnant and non-pregnant women, more severe pain arising from sacroiliac dysfunction is particular attributed to pregnancy. It increases in prevalence with gestation concentrations and is often associated with symphyseal pain.^{2,3} Relaxin, a polypeptide hormone that regulates collagen, softens the ligaments in preparation for parturition. Women with severe pelvic girdle pain in pregnancy have significantly higher serum levels of relaxin than those who are pain free, suggesting that increased joint laxity may be a causative factor.⁵ Other associated factors are a history of backache⁶, parity,^{1,3,4} physically strenuous and unrewarding employment,^{2,3} and, paradoxically, younger age.^{3,6}

While ligamentous laxity and extra mechanical stress^{5,7} would seem ample reason for women to experience severe back pain in pregnancy, other causes may also be present. Though lumbar discs

rarely prolapse de novo during pregnancy, pregnancy may exacerbate a pre-existing condition and seems to be a risk factor for postpartum disc prolapse.¹ Joint laxity may also predispose to spondylolisthesis.

The management of backache is not a glamorous aspect of medicine, yet it has attracted attention recently,^{8,9} because of growing evidence that previous strategies such as bed rest, corsets, traction, and physical treatment were valueless. Prevention may be easier than cure for pregnant women and mothers, to whom general advice on back care would seem to be eminently applicable. Take care not to trip, stumble, or move jerkily; bend at the hip and knee rather than stooping forward; avoid twisting the back; do not lift at arm's length; and carry a single load symmetrically in front, on the back, or on the head.

Immediately after delivery, up to two thirds of mothers may suffer back pain.¹⁰ This is sometimes attributed to epidural analgesia in labor. Regrettably, many investigators have failed to distinguish between localized trauma at the site of insertion, which is not uncommon but usually causes transient pain, and generalized backache or sacroiliac strain, which may be reported by 40% of mothers who do not receive regional analgesia.¹¹

Epidural analgesia for labor has been implicated in the development of chronic backache in some retrospective studies.^{12,13} However, when this theory was tested in a prospective study, neither motor block nor the use of epidural analgesia was associated with the development of chronic backache.¹⁴⁻¹⁶ In this prospective investigation 51% of mothers reported backache during pregnancy.¹⁴

It is regrettable that not only women but also many medical practitioners happily refer to "backache following epidural" rather than "backache following childbirth." Given this climate of opinion, postnatal back pain has become a focus of attention and a common cause of litigation. Some women with postpartum backache seem to wish to believe that epidural analgesia has done the damage and reject out of hand any evidence to the contrary. For everyone's peace of mind, women must be reassured that in no prospective study has the use of regional analgesia in labour been associated with an increased risk of chronic backache.

The present study was carried out to assess the frequency, manifestations and the contribution of various factors to the development of lumbar back pain assess the efficacy of various treatment modalities used for the management of backache in pregnancy.

This is an observational study and conducted at the outpatient department of obstetric services, Jinnah Hospital, Lahore.

SUBJECTS AND METHODS

Patients attended the antenatal OPD in the month of February 2004 were asked about history of backache. Information was obtained from patients (with a structured questionnaire) who had history of backache. The study included 918 pregnant women who came for antenatal follow up or for any reason regarding pregnancy for consultation. The questionnaire, which consisted of several items, was administered to the subjects to evaluate the frequency of back pain and risk factors for high blood pressure during pregnancy.

Table 1: Age, weight, parity and mode of delivery:

	Parameter	Number	Percentage
Age	Less than 20yrs	21	4.86
	21 – 40yrs	407	94.21
	More than 40yrs	04	0.92
Weight	< 50 kg	18	4.16
	50 – 70kg	345	79.86
	> 70kg	69	15.97
Parity	Primigravida	78	18.05
	Multigravida	292	67.59
	Grandmultigravida	62	14.35
Mode of Delivery	SVDs	329	76.15
	Instrumental Delivery	05	1.15
	LSCS	98	22.68

RESULTS

A total of 918 ladies with complete data were recruited in the study. Four hundred and thirty-two (47.05%) reported one or more significant episodes of back pain during their pregnancy. Of these 96 (22.22%) noticed ongoing back pain at the time they became pregnant leaving a true incidence rate of 36.60%. Twenty-one patients (4.86%) were less than 20 years, 407 (94.21%) were inbetween 20–40years of age and 4 (0.92%) were above 40 years. Eighteen patients (4.16%) were less than 50kg, 345 (79.86%) had weight inbetween 50-70 kg and 69 (15.97%) were more than 70kg.

Table 2: Onset of backache.

Backache	Before Pregnancy	During Pregnancy			Total
		1 st trimester	2 nd trimester	3 rd trimester	
	96	36 10.7%	98 29.2%	202 60.1%	432
% Age of Total	22.2%	77.8%			100%

and 69 (15.97%) were more than 70kg. Seventy-eight patients (18.05%) were primigravidas, 292 (67.59%) were multigravidas and 62 (14.35%) were grand multigravidas (as shown in Table 1).

Three hundred and twenty-nine patients (76.15%) were delivered vaginally, 5 (1.15%) had instrumental deliveries and 98 (22.68%) had lower segment caesarean section (as shown in Table 1). In the later group, spinal anesthesia was given in 60 (61.22%), general anaesthesia in 34 (34.69%) and epidural anaesthesia in 4 patients (4.08%). Ninety-six patients (22.22%) had backache before pregnancy and 336 (77.77%) had it during pregnancy (as shown in Table 2). No treatment was taken in 23 patients (5.32%), rest in 297 (68.75%), analgesic in 106 (24.52%) and massage in 6 (1.38%) patients. Subjective relief was up to 50.0% with rest, 75.0% with analgesics and up to 50.0% with massage (Table 3).

DISCUSSION

Prevalence and factors influencing pelvic joint and low-back pain during pregnancy can be associated with considerable disabilities as far as daily activities are concerned. Though uncommon, osteoporosis leading to vertebral or hip pain and fracture can occur during pregnancy and breastfeeding. Women concerned may have a preexisting bone disease revealed by the physiological bone loss that occurs during pregnancy and breastfeeding. Other factors may influence bone mineral density variation such as osteomalacia, steroid or heparin administration.¹⁷

Pregnancy can be a time of joy and exciting anticipation, yet for some the experience can be tarnished by pain, discomfort and feeling unwell. This is often because of many structural and hormonal changes that affect the spine and pelvis and related structures of joints and nerves. A pregnant woman's center of gravity shifts forward under the baby's weight. She also arches her back to accommodate the extra weight. But this stresses the facet

Table 3: Treatment and Subjective assessment of relief.

Treatment	No.	Percentage	Relief up to %
No Treatment Taken	23	5.32	0
Treatment Taken	Rest	297	68.75
	Analgesic	106	24.53
	Any Other	06	1.38
Total	432	100.0	

joints and discs, and makes them sensitive causing pain.

The results of this hospital based study shows that backache is a common complaint in pregnant ladies. Age, weight and mode of delivery are not directly related to occurrence of backache. A similar study carried out in 1977 showed no evidence of association between backache during pregnancy and height, weight, 'obesity index', weight gain, or baby's weight¹⁷.

It was more common among multigravidas especially grand multigravida. As general changes in laxity of supporting soft tissues occur under the hormonal influences, pain represents a relative 'over-use', with repetitive overloading of pre-weakened structures¹⁰. It is also more common in third trimester of pregnancy, as the baby descends into the pelvis, the head can cause pressure on the pelvis, which may be felt as pain. It was also more common in patients who had history of spinal anaesthesia. Although exact aetiology is not known, it may be due to local inflammation. The aggravating factors were physically strenuous work and odd posture. Pain behavior and work variables also play an important role; the pregnant state can add variables to this mix, while options for treatment may reduce¹⁹.

Bengal Kino (Kamar Kas) is obtained from the bark of a tree. It is used by (10%) women in Halwa in a form known as Punjeeri considering it to be "hot" and for the relief and prevention of backache in puerperium and involution of uterus. It is known from ancient times in South East Asia and is used by Hakeems for this indication¹⁸.

A similar study done in Pretoria (South Africa) has shown that the presence of severe low back pain was strongly affected by intensive farm work, residential area (rural) and gravidity of the mother¹².

Upright posture and activity throughout the day can logically lead to increased pain from paraspinal muscle strain, fatigue and subsequently exaggerated muscle, spinal and pelvic stress. Some patients complain of backache at night. It was proposed that increased venous flow through ascending lumbar veins, vertebral venous plexus, and paraspinal and azygous veins occurs particularly at night in response to redistribution of already large extra cellular and venous fluid volumes and to the mechanical vena caval compression, especially in the supine patient. Oedema, stasis, and increased pressure occur in vertebral bodies and around neurovascular elements with subsequent pain⁴.

Before a woman becomes pregnant encouraging her to become fit resolving existing back pain is the key to back pain prevention¹⁴. Most obstetricians recommend conservative treatment for gestational back pain. The use of support binder for pregnancy-low back pain is promising intervention and was well accepted by the participants¹⁵. Exercise and posture correction will minimize but not completely prevent lumbar or sacroiliac pain during pregnancy. Sometimes simple reassurance that symptoms are temporary is enough to alleviate a pregnant woman's concern about back pain. Chiropractic care has been shown clinically to be extremely beneficial in elevating back pain in pregnancy¹⁶. Wheat grass juice is highly recommended for all ills including backaches. The bright green juice contains plentiful nutrients needed to strengthen muscles, ease the nerves and keep the spine flexible²¹.

Additional intervention included moist heat, soft tissue mobilization to the thoracolumbar paraspinals, manual stretching of the hip flexors, abdominal bracing, and wall squat exercises¹⁸. Therapeutic stretches and exercise are an excellent way to keep the pregnant body flexible, strong and mobile¹⁹. Water gymnastics appear to reduce back pain in pregnancy. Acupuncture offers a natural alternative to taking painkillers and anti-inflammatories²¹.

About half of all pregnant women experience backache. Odd posture and heavy work were the most common causes of backache. About half of the patients took treatment mainly in the form of rest. Analgesics are also effective in relieving backache in pregnancy. It is advised that patient should be given special advice regarding posture and exercise.

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