Profile of non traumatic surgical disorders found in the pilgrims/trekkers travelling to Shri Amarnath Ji cave

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Background & objectives: The “Shri Amarnath Ji Yatra” is an annual congregation in which the devotees trek a difficult route of around 40 km to reach to a cave at a height of approximately 14,000 feet at Pahalgam in the State of Jammu & Kashmir, India. These trekkers are subjected to stress and strain of the long mountainous route and difficult security scenario as a result of which they are prone to develop some surgical disorders. We ascertained the profile of non-traumatic surgical conditions met in these people at the various medical aid centres and the base hospital Pahalgam so that a policy could be framed to prevent these conditions.

Methods: This study was conducted at the Government Base Hospital Pahalgam, Kashmir, between June and August 2006. The patients with non traumatic surgical conditions attending the hospital were included in this study. Necessary investigations were done and patients requiring surgical intervention were operated upon.

Results: Of the 1,54,000 devotees who undertook the “yatra”, in 2006 the personnel of the Directorate of Health Services, Kashmir, extended medical aid to 40,082 pilgrims. Of these 40,082 pilgrims, 172 were admitted on the surgical side for various non traumatic surgical disorders. The commonest cause for admission was exacerbation of acid peptic diseases. Nine emergency surgical procedures were conducted at the base hospital and the commonest cause for intervention was perforation of a duodenal ulcer. There was no mortality and the patients responded well to conservative ulcer procedures.

Interpretation & conclusions: The stress of high altitude trekking and assembly of a large gathering of people during the annual “Amarnath Ji yatra” can pose a number of health related problems especially in the old and infirm people as was observed in the study. Pilgrims who intend taking up the yatra in future should seek medical advice prior to their departure. If a person is diagnosed to have peptic ulcer disease he or she should be put on anti-ulcer therapy to prevent potential complications.

Key words: Amarnath yatra - stress - surgical profile
and the holy cave. Due to the stress and strain of this unusual physical and psychological exercise the pilgrims are at a risk to develop some surgical disorders. Even though the incidence of traumatic injuries after falls along with cold induced injuries like frostbite are common at high altitudes, a review of literature revealed that sigmoid volvulus and megacolon occurred at an increased incidence at 13,000 feet. However, there are no published reports about the occurrence of surgical disorders in large congregations. We ascertained the profile of non-traumatic surgical conditions seen in these travellers at the various medical aid centres and the base hospital Pahalgam in 2006.

Material & Methods

This study was mainly conducted at the Government Base Hospital Pahalgam, which is the first referral centre manned by the personnel of the Directorate of Health Services, Kashmir between June-August 2006. The study protocol was approved by the Director, Health Services Kashmir. All patients with non traumatic surgical conditions were included in this study who either presented at this hospital on their own or were referred from various medical aid centres which are set up on temporary basis en route the holy cave.

The patients were examined by the surgeon specialist at the base hospital Pahalgam which is a 30 bedded hospital with the basic investigative set up and a surgical theatre. A detailed history was taken and a clinical examination was conducted in the outpatient department. The patients with acute surgical disorders were admitted in the hospital for further investigation. Patients with history of trauma requiring admission were excluded from this study. Necessary investigations were done and the patients requiring any surgical intervention were operated upon in the base hospital Pahalgam. The patients were carefully followed up during post-operative period till their discharge from the hospital.

Results

The total number of devotees registered for 2006 was 1,54,000. The doctors and the paramedical staff of the Directorate of Health Services, Kashmir, examined 40,082 patients at the various medical aid camps set up en route to the holy cave. The total number of patients admitted for various non traumatic surgical conditions at the base hospital Pahalgam was 172. There was no mortality in the hospital though the number of deaths reported by various medical aid centres due to different causes was 22.

Majority of the patients admitted in the base hospital were males (n=172, males 148 and females 24). The age of the patients ranged from 19 to 76 yr maximum number (33.06%) in 51-60 yr age group (Table I). Of the 172 patients admitted, 163 (94.7%) were managed by conservative means only. The commonest cause for admission in these patients was an acute exacerbation of acid peptic disease (Table II). Only nine patients required surgery. Of these, four had perforated duodenal ulcer, two had acute appendicitis, one each had acute pancreatitis, twisted ovarian cyst, and obstructed inguinal hernia.

There was no mortality. One patient who developed mild wound infection required to stay in the hospital for 12 days and responded to antiseptic dressings and third generation cephalosporin antibiotics. There was one case of thrombophlebitis and one patient developed respiratory tract infection which required third generation cephalosporins and chest physiotherapy in the post-operative period.

Most of the patients were discharged on the post-operative day 7-9 after removal of the sutures and were advised to follow up with doctors at their permanent residence.

| Age (yr) | No. (%)
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<tbody>
<tr>
<td>10-20</td>
<td>13 (7.54)</td>
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<tr>
<td>21-30</td>
<td>10 (5.41)</td>
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<tr>
<td>31-40</td>
<td>11 (6.38)</td>
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<tr>
<td>41-50</td>
<td>44 (25.52)</td>
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<td>51-60</td>
<td>57 (33.06)</td>
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<tr>
<td>61-70</td>
<td>31 (17.98)</td>
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<tr>
<td>71 &amp; above</td>
<td>6 (3.48)</td>
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<tr>
<td>Total</td>
<td>172 (100)%</td>
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<tr>
<th>Diagnosis</th>
<th>No. (%)</th>
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<tr>
<td>Acute exacerbation of acid peptic disease</td>
<td>69 (42.09)</td>
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<tr>
<td>Ureteric colic</td>
<td>27 (16.47)</td>
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<tr>
<td>Undiagnosed abdominal pain</td>
<td>22 (13.42)</td>
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<tr>
<td>Post acute gastroenteritis pain</td>
<td>16 (9.76)</td>
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<tr>
<td>Acute cholecystites</td>
<td>12 (7.21)</td>
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<tr>
<td>Severe urinary tract infection</td>
<td>7 (4.27)</td>
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<tr>
<td>Bleeding per rectum</td>
<td>4 (2.44)</td>
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<tr>
<td>Acute urinary retention</td>
<td>2 (1.21)</td>
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<tr>
<td>Upper gastrointestinal bleeding</td>
<td>1 (0.61)</td>
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<tr>
<td>Pancreatitis</td>
<td>1 (0.61)</td>
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<tr>
<td>Total</td>
<td>163 (100)</td>
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Discussion

Of the total 172 patients admitted for various non traumatic surgical disorders, 163 were managed by conservative means. The commonest cause found in these patients was acute exacerbation of acid peptic disease. The main complaint of these patients was epigastric pain not radiating to back with or without history of vomiting. The clinical examination usually revealed mild tenderness in the epigastric region. It could not be ascertained with certainty as to how many patients had taken non steroidal anti-inflammatory drugs (NSAIDs) which could have contributed to the development of this acute exacerbation as majority of the patients were sages (sadhus) and illiterate people. The second commonest cause for admission was ureteric colic, followed by abdominal pain. Mild pancreatitis was managed by conservative treatment. Conservative management of pancreatitis has been documented in many studies. We did not find any case of sigmoid volvulus or megacolon or active medical condition mimicking acute abdomen as has been documented earlier.

The commonest surgical emergency presented was perforation of a viscus (i.e., perforated duodenal ulcer). This is contrary to the experience of others who have established acute appendicitis as the commonest surgical emergency. Four of the 9 patients (44.5%) requiring surgery had perforated ulcer. Only three of these four patients had prior history suggestive of ulcer dyspepsia while one was totally symptom free before this episode. These three patients had taken some form of anti-ulcer therapy in the past but currently were not on any medication. Only one patient had history suggestive of intake of NSAIDs before the episode. The possible reason for the perforation could be the excessive physical and mental stress due to the rough geographical terrain and the prevailing security scenario. All four responded to conservative surgical procedure of the Ceilen Jones technique. No patients were subjected to definitive ulcer procedure as there was frank peritonitis in all of them. Laparoscopic repair could not be considered as the facilities were not available at the hospital; also there are contradictory reports about this procedure.

Acute appendicitis is associated with lower mortality, shorter duration of hospital stay and lower morbidity than other intra-abdominal infections. Laparoscopic appendectomy could not be done due to non availability of equipment although it has shown better results than open operation. Recent reports have demonstrated that antibiotics alone are useful to treat patients with early non perforated appendicitis.

Patients were given injectable antibiotics peri- and post-operatively till they tolerated oral diet, when oral antibiotics were switched to. There has not been a consensus about the appropriate duration of treatment for intra-abdominal infections. Some believe that antibiotics can be stopped once fever and leukocytosis have resolved, and gastrointestinal function has returned, while others recommend a specific duration of therapy. The development of effective oral antimicrobials for the treatment of intra-abdominal infections has led to a number of prospective randomized trials that have advocated switching to oral antibiotics once patients can tolerate a diet.

The commonest indication for admission in was acute exacerbation of acid peptic disease. The conservative line of management of these patients yielded excellent results. The commonest indication for surgical intervention in patients with non traumatic surgical disorder was perforated duodenal ulcer. If a person is diagnosed to have peptic ulcer prior to journey, it is better to start anti-ulcer therapy to prevent a possible complication from surfacing even though some authors do not favour this regime, while others support the use of anti-ulcer therapy.

In conclusion, our results showed that the persons who intend to come for the “yatra” in future should seek medical advice prior to their departure to rule out any pre-existing disorder. If a person is diagnosed to have peptic ulcer it is better to start anti-ulcer therapy to prevent a potential complications during the journey.

References
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