

Medical Report XXI IAE Maitri, Antarctica

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Station Doctors

Objective

To provide medical aid to the ailing expedition members and to help them for speedy recovery so as to enable them to perform their duties efficiently, and complete their assignment (Scientific and Logistic) in stipulated time.

Sickness Reported During Sea Voyage

I. Expedition Members

1. HMT. Prem Kumar Awasthi of India Army reported on 9.1.2002 with complaints of anorexia, nausea, yellow discoloration of urine and sclera of 5 days duration. Prior to this he developed fever at Goa and consulted a local practitioner who gave him Ayurvedic medicine. The patient was examined thoroughly and clinically diagnosed to be suffering from Hepatitis and accordingly treatment was given.
2. Nb. Sub. Gurubachan Singh (room partner of Prem Kumar Awasthi) reported on 11.1.2002 with complaints of vomiting, giddiness and yellow discoloration of urine. A thorough medical examination was performed and he was also diagnosed to be suffering from Hepatitis. Treatment was given accordingly.
3. On 23.1.2002 a medical report on clinical condition of both the patients was given to the expedition leader. On 25.1.2002 expedition leader Mr. R.P.Lai constituted a medical board under chairmanship of Dr. M.S. Martolia (Station Doctor XX, IAE) and asked to give opinion about retention of these two patients at Maitri, Antarctica as winter team member. The board examined both the patients on 12.2.2002 and came to the conclusion that

considering their disease it is not advisable to keep both the patients at Maitri, Antarctica as winter team member.

4. Three cases of seasickness reported during voyage and the condition was controlled by antiemetics only.
5. Two cases of traumatic injury (crush injury of the thumb, injury on hand due to fall of heavy object), one case of low back pain and one case of Acute Gastritis (due to alcohol abuse) reported during that period.

II. Sickness Reported at Maitri During the Expedition

1. Major R.K. Sharma of Indian Army developed severe headache during convoy operation. Medical advice was given through HF communication. Initially he responded with the drug but later on his condition deteriorated. He was brought to the Maitri station in precarious condition. A thorough clinical examination was performed and he was found to be suffering from severe dehydration and chest infection. Treatment was started immediately with I.V fluids, drugs and other supportive measures and after a week he recovered completely.
 - During Polar night when there was a fire accident on the duct line he rushed outside with fire extinguisher without proper clothing and shoes. Due to extreme cold he developed Bronchospasm and cold injury of his feet. He was immediately given medical assistance with injectables and slow warming of the feet. He fully recovered after few days.
 - He developed bleeding par rectum and diagnosed to be suffering from Haemorrhoides. In this connection help from the Russian surgeon is taken to exclude other anorectal pathology. Treatment was given and now he is asymptomatic.
 - He developed severe pain and swelling of his left feet due to fall from track of vehicle after twisting his feet. He was diagnosed to be suffering from Ligamentous injury around the ankle joint. Treatment was given with analgesic and anti-inflammatory drugs along with leg splint.
2. HMT. Gangadharan developed abscess on right side of his abdominal wall for which Incision and drainage operation was performed.
3. Sudesh Jamwal of SASE developed severe pain and swelling of right wrist joint due to fall on outstretched hand on blue ice.

Radiologically no fracture was detected and was treated with splint and drugs.

4. HMT. Sita Ram developed severe pain and swelling on the dorsal aspect of his left hand due to fall of heavy object on it. Radiologically no fracture of Carpal / Metacarpal bone was detected and was treated with splint and drugs.

Pattern of Sickness (System Wise) Reported During Expedition

- a. Musculoskeletal disorders: Arthritis, Osteoarthritis, Myalgia, Arthralgia, Cervical Spondylitis.
- b. Respiratory System: Respiratory tract Infections.
- c. Gastrointestinal System: Gastritis, Dyspepsia, Diarrhoea, Dysentery, Round Worm infestation, Amoebic Colitis, Acid Peptic Disease.
- d. Dermatological: Ichthyosis, Herpes Simplex, Mycotic Infection, Intertrigo, Boils, Folliculitis, Abscess, Primary irritant Dermatitis, Seb. Capitis, Seb. Dermatitis.
- e. Ophthalmological: Stye, Conjunctivitis, Chalazion.
- f. E.N.T.: Epistaxis, Common cold, Ac/Ch. Allergic Rhinitis, Pharyngitis, Otitis Media / Externa.
- g. Genito-Urinary: Urinary tract Infection, Balanoposthitis.
- h. Oro-Dental: Toothache, Glossitis, Acute Parotitis, Caries teeth, Bleeding gums, Aphthous Ulcer.
- i. Traumatic: Minor cuts, Wounds, Abrasions, Crush injury, Splinter injury.
- j. Thermal Injury/ Burns : Chilblains, Chemical burn, Burns due to hot water.
- k. **Aggravation of Preexisting condition**: Hypertension.
 1. **Recurrences**: Acid Peptic Disease, Low back pain.
- m. Nervous system: Headache, Insomnia etc.

In the initial part of the expedition incidence of Gastrointestinal problems were very high and it was either due to contaminated lake water or expired food items. When water filters were installed incidence of such problems were reduced significantly.

Medical Facilities at Maitri

I. Infrastructure:

1. **Space:** Inadequate
2. **Equipments:**

1. E.C.G Machine	Functional
2. X- Ray Machine	Functional
3. Boyle's Apparatus	Not Known
4. Pulse Dosimeter	Not Known
5. Semi Auto Analyzer	Non Functional
6. Glucometer	Functional
7. Cardiac Defibrillator	Not Known
3. **Drugs:** Stock was sufficient in the beginning, but most of the drugs expired during middle of the expedition. Fresh demand was given for few important drugs but not supplied by cargo plane.
4. **Pathological Laboratory:** Almost nonexistent although , instruments and some old reagents are present.
5. **Facility for Dental care:** Partially present but requires prior training of doctors and some more instruments.
6. **Medical Library:** Sufficient books are present but periodic up-gradation required with newer editions of books.
7. **Tele Medicine facility:** Facility is available but the in charge of this facility is not the Station Doctor but Communication person. Optimal utilization of this facility cannot be done due to lack of Laboratory facility.

Keeping in view of the shortcomings some additional modification has been done to improve quality of Medicare.

1. The Operation Theatre is shifted to the new Maitri Hospital complex. The hospital complex was inaugurated during XVIII, Expedition but up till now the OT was used for playing Table Tennis.
2. A Pathological Laboratory is established in a small room in the New Hospital Complex and now most of the routine Pathological

Investigations can be done provided fresh supply of reagents are made at regular interval.

3. Dental chair, which was not installed in pretext that it is a specialized technical job, is installed in the small room (previous OT) adjoining the MI room. All its systems verified and checked and found to be working properly.