

## Society News

XXXII Annual Meeting  
Indian Society of Aerospace Medicine

### PRESIDENTIAL ADDRESS

**AIR MARSHAL PM SUNDARAM, AVSM, PHS**  
Director General of Medical Services (Air)  
President, Indian Society of Aerospace Medicine



It is a matter of great pride and privilege to me as head of Medical Services of the Air Force and President of the Indian Society of Aerospace Medicine to welcome Air Chief Marshal SK Mehra, PVSM, AVSM, VM, ADC, Chief of the Air Staff and the other dignitaries. I also, would like to welcome the delegates, senior retired Air Force Officers and their lady wives who have graced the occasion by their presence.

Chief of the Air staff has been very kind to spare valuable time from his ever busy schedule and to be with us on this occasion. The achievements in aeromedical services to aircrew have to-day, been possible due to keen interest in developing IAF to its present status, continued efforts to promote flight safety and encouragement to medical staff by the Chief of the Air Staff. The flying has become highly technical and more skilled. The modern cockpit work space is complicated and demanding in nature. The pilot has to be alert and maintain a very high degree of state of health to fulfil the operational requirements of task assigned to him from time to time. To ensure this, regular monitoring of health is required at personal and at different levels of supervisory ladder/staff. The medical officers in the Squadron and in SSQ have an important role to play in giving timely advice to aircrew to ensure their good health and promote flight safety.

The Aero Medical Society of India was established in 1952 and has now blossomed to its 38th years of healthy age. It was originally organised by a group of dedicated Doctors and Scientists as a Society in Delhi. The Society has played an important role in

standardising the various procedures for examination and fitness of pilots and aircrew members.

The Institute of Aviation Medicine at Bangalore has appropriately been redesignated as Institute of Aerospace Medicine this year. The Institute has been responsible in surfacing the scientific knowledge in Aerospace Medicine in our country. In that, the Institute has done a yeoman service in this field. Apart from fundamental research in various disciplines of Medicine and Aerospace Medicine, the Institute has developed useful equipments which can be used for carrying out tests and training to our aircrew. There is a regular interaction between doctors, aircrew including test pilots and R and D Organisations like DEBEL, ADA and ADE to ensure flight safety requirements in the future design of aircrafts and testing of life support systems. The Institute is a recognised agency to provide aeromedical support to National Space Programmes and conduct life science experiments in space.

This society is also maintaining rapport with national and international Aeromedical Societies like Aeronautical Society of India so that the space and other programmes are developed on modern scientific basis. The dialogue with National Airport Authority of India and Director General Civil Aviation to develop aeromedical facilities for civil pilots, is already taking shape and soon the project will be completed.

The vertigo "a sensation of disturbed equilibrium when the accustomed sense of orientation within one's environment is temporarily disturbed" could be disabling on ground. Aviators are not immune and certain flight environmental conditions also cause vertigo. More so, the cockpit is no place to get incapacitated due to vertigo. It is challenging task to evaluate an aircrew who suffers from transient attacks of vertigo. To-day, we are fortunate to have Padma Shri Dr S Kameswaran, Honorary Surgeon to the President of India, who will deliver Subroto Mukerjee Memorial Oration. There could be no better person than him in elucidation of Vertigo and its implications in day to-day's life with reference to aviators. His topic for the oration is "Vertigo in clinical Practice". I am sure, his talk will benefit us in laying down the guidelines for disposal of cases of vertigo in aviators.

I would like to thank the delegates, the guests, ladies and gentlemen who have graced the occasion, this morning by their presence. I would now request the Chief of the Air Staff to inaugurate the 32nd Annual Meeting of Indian Society of Aerospace Medicine.

## INAUGURAL ADDRESS

**AIR CHIEF MARSHAL SK MEHRA**  
PVSM AVSM, VM, ADC  
Chief of Air Staff



It gives me great pleasure to be here this morning among the members of the Indian Society of Aerospace Medicine and distinguished guests. I am also happy to note that the scheduled programme covers a wide range of topics which should stimulate useful and interesting discussions. One of the most important objectives of the medical fraternity in the Air Force will continue to be to ensure peak fitness of the force physically and mentally in order to enable it to operate effectively under varying conditions.

In aviation or aerospace, the three main elements are man, machine and environment. Of these, man is the most important one and is involved in all facets of aviation. He designs and manufactures machines. He services and flies them. He forecasts weather and decides the conditions under which to fly. More importantly it is he who is behind the machine that he operates as a weapon of war. Therefore, whether it is exploration or Air Operations, it is the man that is our prime concern.

Last year, I had talked to you about 'G-LOC' or 'G' induced loss of consciousness. Some measures are already on hand to address the problem such as weight training and centrifuge tests etc. I am also happy that the problem features in your discussions in much more detail this year. I, however, wish to caution against considering 'G-LOC' as a general problem confronting all aircrew. This is peculiar to only the aircrew operating modern highly agile air superiority fighters of MiG-29/Mirage 2000 class.

In spatial disorientation, no doubt, there is adequate documentation on the subject. But, at the risk of being repetitive, I would like to emphasise the need to address ourselves to possible causative factors such as cockpit lighting, instrument and symbology presentation or any other design features which might indirectly contribute to spatial disorientation. To this we could now

add the problem of Geographical Disorientation which is a problem affecting situational awareness resulting in aircrew getting lost or landing on a wrong runway or even a wrong airfield. This has happened in both civil as well as military aviation and has involved experienced aircrew as well.

There are other areas too which can contribute directly or indirectly towards human error problems such as 'fixation' or 'fascination'. Why is it that an aircrew sometimes over concentrates on one subject, say a target, and disregards all other visual cues. Why is it that a pilot sees only what he wants to believe - either in the cockpit or the ground features - when they are actually not there.

Operationally, we may have to face unconventional environment. Let me talk about the necessity of having to undertake air operations effectively in a NBC warfare scenario. In the fifties, use of Napalm bomb was unthinkable. Today no one thinks twice about using it. Similarly, chemical weapons today come under the banned category, but many countries have a stockpile of these. They have been used in West Asia but there has been very little that has been said about it. Therefore, our ability to operate under conditions of NBC warfare is a requirement. We have made a modest start by training some personnel abroad in NBC warfare. We have created a NBC Cell in Air HQ and have already started a NBC School. A lot more needs to be done to gear up defensive measures and educate personnel to operate under such conditions.

Yet another area that comes to my mind is the fitness of our ground crew to operate at high altitudes. Recently, they have established yet another glorious chapter in high altitude operations in Siachin Engine change at 23,000 ft AMSL.

Having said all this, I wish to place on record my appreciation for the services being provided at all levels be it in Units, Stations or at hospitals. Our specialists have assisted creditably in dealing with a large number of patients including battle casualties from Sri Lanka and Siachin as also in providing timely care and treatment of a number of passengers critically injured in the Airbus A 320 accident earlier this year. I understand that management of casualties after a civil aircraft disaster also features on your agenda for discussion. Aerospace medicine has received very good attention in the past years the world over and a lot has been achieved in ensuring fitness and efficiency of the 'MAN'. We feel further encouraged by the interaction at the international level of our aeromedical society - the first of which was during the joint Indo-Soviet Space flight. Subsequent interactions with NASA and other commonwealth organisations has given us an opportunity to share

experiences. In furtherance of this, we are glad to have amongst us specialists from the Soviet Union and the Secretary General of International Federation of Aviation Medicine who is expected to be here later in the day.

The Society has now come of age and its members are actively involved in achieving professional excellence. I wish it all success in the years to come. As the Chief patron of the Society, I consider it my privilege to welcome to this conference the renowned ENT Surgeon Padmashri Dr Kameswaran. I am sure you all are looking forward to his Subroto Mukerjee Memorial Oration on 'Vertigo - Recent Advances'.

There are other wide range of topics scheduled for discussion at this year's meeting. The operational staff, I am sure will be keenly awaiting your considered opinion and recommendations.

In conclusion, I convey my deep appreciation and congratulations to the organisers of this conference. I am confident that the papers to be presented to this august body will be of the highest professional standards and will be thought provoking. I wish the organisers and the delegates success in their endeavours to further improve the quality of medical care in the Air Force and thus contribute towards the operational goals of the Service.

With this I now declare the Thirty Second Annual Meeting of the Indian Society of Aerospace Medicine open.

#### **Executive Committee (1990-91)**

The Executive Committee of the Society was re-constituted during the 32nd Annual General Body Meeting held on 26 Jul 90. The newly elected members are:

- Air Cmde Surjit Singh
- Dr Vijay Kumar
- Dr Lanka Shivaji
- Wg Cdr (Mrs) P Bandopadhyaya, VSM
- Wg Cdr SN Sharma

#### **Fellowships**

The following members were elected as associate fellows of the Indian Society of Aerospace Medicine during the meeting of Executive Committee of the Society held on 26 Jul 90.

- Wg Cdr SP Deshmukh
- Wg Cdr SN Sharma

#### **Best Scientific Papers : XXXII Annual Meeting**

The following papers were adjudged as the best in their respective categories during XXXII Annual Meeting

of the Society held at IAM on 27th-28th July 1990.

"Structural Failure of Canopy - A Case Report," by Wg Cdr P Tyagi, 15 Wing AF

"Percutaneous Transluminal Coronary Angioplasty - Two year follow up," by Wg Cdr SN Sharma, IAM IAF.

#### **Promotions**

We congratulate the following members on their promotions

- AVM VK Singhal, VSM
- Air Cmde SKS Jauhari
- Air Cmde KN Prabhakar
- Air Cmde AK Sarkar
- Wg Cdr PK Chhotray
- Wg Cdr M Mohan
- Sqn Ldr Girish Chandra
- Sqn Ldr BJ Rao
- Sqn Ldr UR Dubey
- Sqn Ldr PS Sarna
- Sqn Ldr AS Rathore
- Sqn Ldr (Miss) Sharmila Mitra
- Flt Lt (Miss) N Tutakne
- Flt Lt RK Pathni

#### **Retirements**

The following members have retired from active service :

- AVM BN Badrinath
- Wg Cdr SK Nath
- Wg Cdr KL Sindhi
- Wg Cdr MN Gupta
- Flt Lt N Rishi
- Sqn Ldr PK Mishra
- Sqn Ldr AS Rathore
- Flt Lt (Miss) A Alam Kapoor
- Flt Lt Rajneesh Kumar
- Sqn Ldr Shyamal Dutt
- Flt Lt Jigme Sethi
- Flt Lt AK Tripathi
- Flt Lt RK Natyar
- Flt Lt PK Gahoe
- Flt Lt Bahadur Singh
- Flt Lt AK Tandon
- Flt Lt MT Khan

We wish them all the very best and hope that their active association with the Society will continue.