Disability Pattern in Aircrew

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AIRCREW in IAF are evaluated at two specialised centres i.e. AFCME and IAM. Cases are referred from various peripheral units whenever the aircrew suffer from a disease, sustain an injury or are detected to have any disability during routine periodic medical examinations, which necessitate removal of the aircrew from flying duties. Detailed clinical examination, laboratory and special investigations are carried out at these centres to assess the fitness of such aircrew for return to flying duties. All cases undergo examination pertaining to all systems and not only restricted to the system affected.

This special arrangement is considered essential for several reasons :—

—The cost of flying training and modern aircraft being prohibitive, a poor country like ours can not afford any losses of aircraft/aircrew, due to medical disabilities among aircrew.

—Early detection of disabilities among aircrew is possible by periodic medical examinations, but proper assessment of such disabilities is possible only in specialised centres.

—Incidence of diseases can be monitored by these special centres and remedial measures recommended in time.

—Assessment of aircrew, with disabilities, for flying duties is a complex process requiring consideration of many factors. It could be variable in case it is carried out at many centres. Special centralised assessment will ensure uniformity.

The main guidelines for medical assessment of aircrew are :—

— Flight safety
— Health and welfare of the individual
— Operational requirements

Medical examiner's attitude, experience in his own speciality and knowledge of aviation in particular are as important as having an excellent laboratory and sophisticated medical equipment. While the health and welfare of the individual should be the primary concern, too many waivers by too liberal an assessment would jeopardise flight safety. Far too stringent and unrealistic approach resulting in grounding a large number of pilots would hamper peacetime preparedness and sabotage the mission accomplishment in times of hostility.

Materials and Methods :

Records of Disability Medical Boards held at AF CME from Jan. 1975 to Oct. 1977 were examined. Total of 1262 boards were held on aircrew category of IAF personnel. Data were collected year-wise relative to :

— biological system involved in disability
— rank structure of these aircrew and
— disposal pattern.

Results and Discussion

Table I shows the incidence of disability boards according to biological systems. Maximum number of boards dealt with cardiovascular system. Injuries to extremities come next followed by endocrine and metabolic diseases. Medical boards for height, weight and build disorders (this term is preferable to 'obesity' as body composition studies are not being done at present) have increased considerably during 1976 and 1977.

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TABLE I

Medical boards according to the Biological Systems

	System	1975	1976	1977	Total
1.	Cardiovascular	115	123	88	326
2.	Extremities	76	63	39	178
3.	Endocrine & Metabolic	54	52	46	152
4.	Eye Disorders	40	46	23	109
5.	Height, weight & build	15	42	43	100
6.	Gastro Intestinal	30	27	24	81
7.	Genito urinary	16	30	18	64
8.	Neuro-psychiatry	19	20	17	56
9.	Hearing Loss	14	18	14	46
10.	Respiratory System	15	14	16	45
11.	Spinal Injuries	14	15	11	40
12.	Other ENT Problems	17	12	7	36
13.	Head Injuries	14	11	4	29
		Grand Total	—		1262

Among the cardiovascular abnormalities ECG abnormalities constitute the largest percentage (Figure 1). In 1977 it formed 47.7 per cent. Among the endocrine and metabolic disorders diabetes mellitus and GTT abnormalities form the bulk. While cases with diabetic responses have come down during 1976 and 1977 there is a corresponding increase in GTT abnormality. In 1975, 83 per cent recorded the disability as 'diabetes mellitus' while GTT abnormality consisted only 11 per cent. In the subsequent years GTT abnormality forms 36 and 33 per cent respectively.

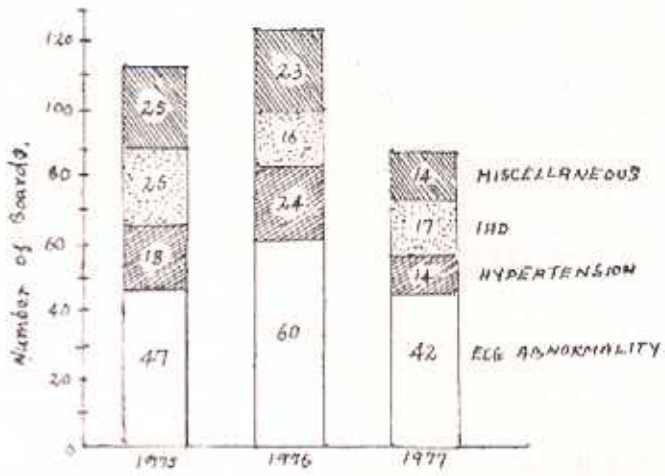

Figure 1 : Major Disabilities under Cardiovascular System.

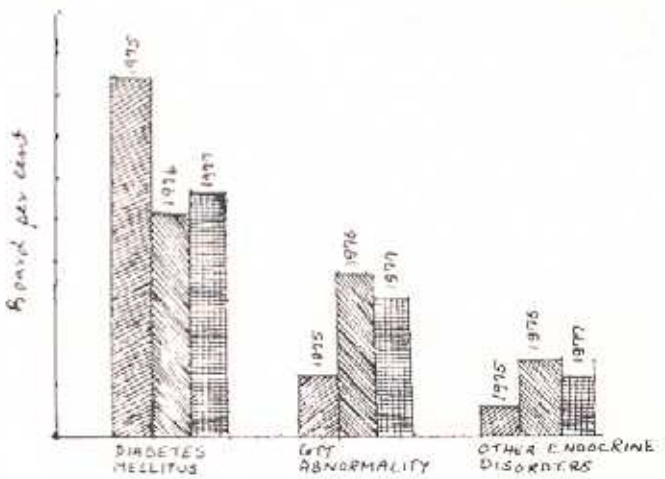

Figure 2 : Endocrine & Metabolic Disorders.

Rank status of aircrew reporting to medical boards in these three years is shown in Table. 2.

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TABLE 2
Rank Distribution of Medical Boards

Systems	AM	AC	GC	WC	SL	FL	FO	PO	OR
C. V. S.	3	19	30	48	79	78	12	6	51
Extremities	—	4	2	9	47	76	16	8	16
Endoc. & MET.	—	5	10	38	53	31	10	—	15
Eye	3	9	5	14	35	26	9	6	7
Obesity	1	2	3	15	37	35	1	—	6
G.I. Tract	1	1	4	10	20	25	9	2	8
G.U. Tract	—	1	1	12	21	16	5	—	8
Psychiatric	—	—	—	10	10	24	3	2	7
Hearing Loss	—	2	5	10	10	9	—	—	10
Resp. System	—	2	1	5	18	10	2	3	4
Spinal injury	—	1	—	3	12	9	5	—	—
ENT Problems	—	—	1	6	10	10	5	1	3
Head Injury	—	—	—	2	11	10	5	1	—

AM — Air Marshal
AC — Air Commodore
GC — Group Captain
WC — Wing Commander
SL — Squadron Leader
FL — Flight Lieutenant
FO — Flying Officer
PO — Pilot Officer
OR — Other Ranks

The majority of these cases are under medical observation for ECG and GTT abnormality or for injuries to extremities.

Figure 3 shows major disorders in the group comprising of Wg Cdrs, Sqn Ldrs and Flt Lts which has been compared to higher and lower ranks.

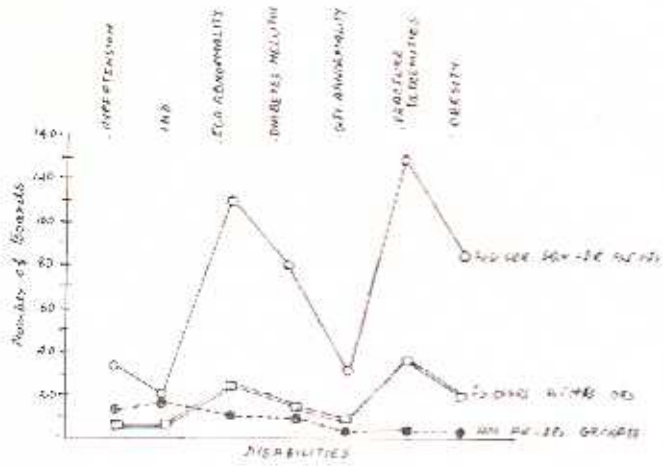

Table 3 gives the medical categories of aircrew seen at AFCME from 1975 to 1977.

TABLE 3
Types of disposal given (Medical categories)

Year	Full	Restricted	Ground (T)	Ground (P)
1975	116	157	158	8
1976	120	175	173	8
1977	93	120	127	25

T—Temporary P—Permanent.

Temporary category is given till a stage of finality is reached regarding a disability, thereafter permanent category is given. Permanent grounding is done when the individual is unable to get back his flying category within a period of two years or when special orders are present for a particular disorder (Myocardial infarction) or when disability contracted is of such a nature that there is no chance of regaining minimum standard for flying duties. Causes for permanent grounding in these years are as shown below :-

Causes for permanent grounding
Myocardial Infarction
Diabetes Mellitus.
Hypertension.

Fracture Vertebra with neurological deficit.
Bilateral deafness.
Loss of uniocular vision
Fits.
Neurosis/psychosis
Bronchial asthma
Pulmonary fibrosis
Meniere's disease.
Chronic alcoholism

Conclusion :

Disability pattern during the last three years was studied. Past analysis of disabilities among aircrew had shown progressively increasing incidence of diabetes mellitus and ischaemic heart disease. Early detection and correction of risk factors have been emphasised at all levels. This has resulted in a large number of aircrew being referred for evaluation of ECG & GTT abnormalities. Obesity has long been considered a risk factor for many illnesses. Health education, periodic comprehensive medical examination, thorough laboratory investigations and strict adherence to height, weight and build chart has been very effective as a secondary preventive measure. Large number of officers are motivated to have regulated diet, regular exercise and fit physique. There is already a decreasing trend in diabetes mellitus and ischaemic heart disease.

Boards for injuries of extremities continue to be high, probably because of more number of officers taking to two wheeler vehicles for economic reasons. However, there is definite decrease in head injuries since the introduction of helmets.

Lectures on traffic regulations, awareness of dangers of driving under the effect of alcohol, provision of service coaches for personnel to carry them to and from places of duty, specially in large cities with heavy traffic and periodic inspection of private vehicles, may help in reducing accidents and disabilities.

While special centres continue to serve the useful purpose of providing standard and comprehensive medical assessment, initial referral has to be from unit medical officers. Many of the early abnormalities are ' lab. based '. For the ' yield ' to be high, medical officers should thoroughly examine the aircrew and order basic investigations at the time of periodic medical examinations. Aircrew should be encouraged to report early symptoms. A helpful realistic and progressive approach by all concerned and education to the effect that failure to report symptoms to ' avoid losing their medical category ' may actually result in termination of their career, is required.