DECOMPRESSION SICKNESS ENCOUNTERED DURING HYPOBARIC HYPOXIA TRAININGS

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Disclosure Information

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I have no financial relationships to disclose.

I will not discuss off-label use and/or investigational use in my presentation.
Introduction

- Physiological Training
- Hypoxia Training (Hypobaric)
- Decompression Sickness (DCS) is caused by Nitrogen
- Symptoms of DCS can start:
  - Ascending
  - At altitude
  - After Descent.
Introduction

- DCS increases;
  - Age
  - Weight (BMI, Body Fat)
  - Altitude
  - Altitude Exposure Time
  - Physical Activity
- DCS incidence ranging from 0.01% to 0.29% (*)

Purpose of the Study

• To determine:

Frequency of DCS occurred during/after Hypobaric Hypoxia Training
Methods

- DCS Events gathered;
  - Hypoxia Training Session Log Book
  - Patient Files
  - Aircrew`s Medical Records
Methods

Hypoxia Training Profile

- 25000 ft.
- 18000 ft.
- 8000 ft.
- 30min.

100% O2
Results


- \( N_T = 8295 \)
- \( N_F = 1805 \) (*)

**NT**: Hypoxia Training Number

**NF**: Hypoxia Sessions (Flights) Number

**PTIO**: Physiological Training Inside Operator

(*) \( N_F \): 1 inside operator participate in Hypoxia Flights

- 1 (0.055%) PTIO
- 4 (0.048%) Trainee
Discussion
Discussion

- Every flight gear is controlled before training
- Improper Valsalva Maneuver
- Sinus Check
Discussion

- Joint Paint (Bends – Type-I DCS)
- Physical examination and laboratory analysis
- Treatment Table – V
- Treated successfully
- No Flight Restriction
Discussion


(**) Turkish Air Force Aircrew Health, Research and Training Center

(*) No Denitrogenation
Limitations

- No inflight DCS documented.
  - Descent relieve symptoms
Conclusion

- Lower DCS incidence (no inflight DCS)
- We have made arrangements in the hypoxia training curriculum and existing procedures.
  - to prevent mask tears
  - to document inflight DCS