AUMB Diver Medical 'Pearls'

(*draft revised 15no010*)

Cancer / Malignancy *(ref: DWAN e.mail 29jul09)*

Return to or selection for diving duty after treatment for this depends not only upon risk of recurrence, but also upon initial SITE of recurrence, and risk that said recurrence manifests itself in a way that causes sudden or subtle incapacitation. After-effects of therapy are also a key issue. AUMB handles these determinations on a case-by-case basis, so no candidate or diver should be blessed fit for diving trg or duty without C/DM/AUMB review.

Some Pearls to be aware of and what YOU can do to facilitate/expedite AUMB decisions:

1. Pathology. Detailed histopathologic report is key to risk determination - ensure this is available.
2. Oncologist opinion. Your referral note should include something like this: "Please estimate the per annum risk of recurrence, the frequency of recurrence in common sites, and the risk of recurrence in any given site presenting as an incapacitating event (please note we are particularly concerned about [for example] brain mets presenting as seizures, and bone mets presenting as pathologic fractures)"
3. Followup. The frequency and nature of medical followup required bears upon not only diving disposition, but also G & O-factors as well. For example, how often should they have oncologist review and CXR, CBC, MRI of the head, etc?
4. Agents used in chemotherapy. May also bear upon disposition: e.g., hx of bleomycin therapy carries heightened risk of O2 toxicity - possibly lifelong; some alkylating agents are associated with pulmonary fibrosis and restrictive lung patterns that may affect PFTs
5. "Cure". Another important thing to ask consultants - when can the pt be regarded as 'cured'? For example, some cases of Hodgkin's disease or seminoma can eventually be regarded as 'cured'; others like melanoma and breast Ca, almost NEVER can (because of their unpredictable potential for recurrence after prolonged disease-free interval).

Diver ECGs *(ref: DWAN e.mail 15sep09)*

Para 38 of the SWD Directive requires that ECG be done, however we haven't clearly specified what to do about interpretation. For Aircrew, guidance is laid down in para 30 of http://winnipeg.mil.ca/1CdnAirDivSurg/AerospaceMedicine/Guidelines/600-01/FSG%20600-01%20Aircrew%20Cardiovascular%20Risk%20Screening%201.pdf:

"**INTERPRETATION OF AIRCREW ECGs**

30. …..responsibility for arranging interpretation of aircrew ECGs has been delegated to Base/Wing level. Many ECG machines provide an automated interpretation, and the following guidelines are offered

- ECGs with an automated interpretation as "normal" can be so accepted
- ECGs with an abnormal or borderline interpretation should be further reviewed by an internist or cardiologist. This can be arranged either locally, or by forwarding the ECG to CFEME for review."

The Undersea Subcommittee of AUMB asks that we adopt a like approach for Diver ECGs, namely, machine-read 'normal' can be accepted as such; anything else should have a LOCAL internist/cardiol opinion if at all possible (so action can be taken as/if appropriate locally before staffing the file onwards).
Any doubtful cases can and should of course be discussed with applicable reviewing/authority or C/DM.

Operationally-Significant Asthma in Divers *(Conversation Dr Gray 10mar'10; DWAN e.mail 16mar'10)*

Most important pearl is that this dx is made not by spirometry, PFTs, or methacholine challenge testing (although these can provide important objective amplifying information) but by HISTORY. Because of this, no 'pass-fail' standards exist for any of these tests (also because of their notorious variability due to various factors); they merely act as triggers to consider further investigation or enquiry (much as, for example, elevated WBC count is not of itself disqualifying - just highlights the need to search for an underlying cause).

Some keys features of the history to elucidate (probably as a routine, but certainly in all doubtful cases):

1. Any past history (PHx) of wheeze, 'bronchitis', or 'asthma' ('childhood asthma' before age 12 is less significant, but should not be discounted);
2. PHx cold and/or exercise intolerance, especially chest tightness, SOB, or cough;
3. PHx of protracted cough post URI;
4. Any PHx use of inhaler(s); and
5. PHx (other) atopic phenomena (eg eczema, seasonal rhinitis, 'hay fever').

Any/all cases should be discussed with a C/DM, which may include evaluation by an AUMB Internist.

Sign-off of CF Diver Log (CF849 or equiv) *(ref: DWAN 28oct/10no'010)*

The following conventions apply:

1. While ANY CF diving medical Health Care Practitioner (HCP) can sign off the log noted above, it is normally the EXAMINING HCP who does so;
2. The effective date recorded therein is the date the examination actually took place;
3. The examining HCP has some discretion as to whether to await final results of additional testing or followup review that remain pending. Signoff need not be delayed if the pending results/review are thought UNlikely to bear on the diver's fitness, but SHOULD be deferred otherwise;
4. The CF2033 or DND2452 documenting the PHA should be annotated as to whether (or not) the dive log has been signed off; and
5. The examining HCP also has some discretion as to whether to record in the log any diving restrictions. Restrictions expected to be of shorter duration (ie, <30days) may be handled using CF Sick Chits (CF2018) and not necessarily recorded in the log, whereas as longer duration ones (3mo or longer) must be addressed with a TCat and CF2088, and should be recorded in same.

V3 Diver Candidates: Minimum Acceptable Criteria for Selection (*ref: DWAN 13may09*)

While at the time of issue of this 'Pearls' revision, formal DDiveS promulgation via DGM for new diver visual standards IAW DAOD 8009-0 was pending, the following guidance (previously-promulgated at ref) may be used for the interim:

1. Uncorrected Visual Acuity (VA,as confirmed by optometrist) no worse than 6/30 binocular (driven by Greeley and Assoc study that suggested this is min VA req'd to find a surface boat);

2. Specific environmental constraints may drive a more restrictive std IF no correction allowed; eg, Army requirements may mandate V1 in order to enable aiming a weapon upon mask removal at the surface;
3. Any divers must be CORRECTIBLE to V1 - and have no evidence of eye disease/pathology;
4. Options for Diver Visual Correction are summarized as per Marcom Surg Directive imminently to be promulgated, and include grinding corrective lenses into personal mask, contact lenses, respirator goggles, and LASER refractive surgery. However, it should be noted that no one option is 'best', and individual preferences and operational constraints (not medical ones) are what determine acceptability of each; and
5. As also indicated in the Directive, entitlement, procurement authority, and approval for operational use are all issues that must be settled separately from this medical standards/certification one.

FINALIZATION:

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