Risk reduction options

Venipuncture, blood pressure measurements and alert bracelets

QUESTION **Many lymphedema patients, health professionals and advocates are still working under the impression that there should be no needles or blood pressure measurements on the lymphedema affected or at risk arm. Regarding the Alert-type bracelets, do we still need to give these out?**

A This is still an area of debate and is based on long-standing beliefs rather than real evidence. However these beliefs are deeply entrenched and will be difficult to change or disprove without well-designed clinical trials.

Much like exercise after surgery was thought to increase lymphedema risk (now disproven by numerous studies), blood draws and blood pressure measurements on the affected arm are also unlikely to pose a significant risk. High Body Mass Index (BMI), the number of lymph nodes removed and cellulitis on the other hand, are risk factors that are more strongly associated with the development of lymphedema. Cellulitis is a rare complication of blood draws. Women who have had an axillary dissection, with numerous lymph nodes removed, are at higher risk for the development of lymphedema compared to a woman who has had a sentinel node procedure where 1-3 nodes are removed solely because of the greater disruption to the lymphatics with an axillary dissection, irrespective of blood draws or blood pressure measurements on the affected side.

In my practice, when a woman is having a difficult time with blood draws on the unaffected side, I counsel them that the risk of developing lymphedema after blood draws on the affected side is theoretical and if the affected side needs to be used for patient comfort and to decrease anxiety, then using the affected side is a reasonable option.

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A If lymphology and clinical lymphedema practice as scientific disciplines are to grow and be respected by fellow clinicians (such as oncologists), then our recommendations need to be evidence-based. The evidence for avoiding blood draws is anecdotal rather than being based on rigorous research. However, it would be difficult under present circumstances to get ethical approval to conduct controlled trials on lymphedema risk reduction practices. (Who would agree to participate in a controlled experiment where the intervention group has repeated blood draws or injections in an at-risk arm?). In the meantime, guidelines do state that if possible, blood draws should be in the opposite arm. Blood pressure measurements are theoretically very low risk and this does not appear as something to avoid in the present recommendations of the Lymphedema Association of Quebec, although they are prescribed in guidelines of other associations.

Regarding lymphedema alert bracelets, I think that these could be worn on hospital appointment days if they facilitate informing the technician who is taking blood to use the opposite arm. Wearing these bracelets all the time, in case a terrible accident occurs, is a personal decision—but this seems like overkill to me. If the at-risk person is unconscious and needs very urgent intravenous access, perhaps which arm the emergency personnel use in the first instance should not be the prime concern. LP

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A full set of references can be found at **www.lymphedemapathways.ca**