
Focus on an Internet Meeting

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The Foam_PFO Event Sclerosing Foam and Patent Foramen Ovale ¹ was held on the internet from midnight of Feb 11th, 2007 to midnight of Feb 23rd, 2007, GMT. Supported by the Vascular mailing List VASCULAB (1063 members), also this Event was organised as a mailing List, lasting a very long period, as it was possible to participate easily from office or home also spending one hour on line per day. Participation was organised in two groups: the Panel of Vascular Experts and the Participants. The Vascular Experts were asked to write a preliminary Short Comment, to be submitted at the start of the discussion. As many of the Experts were personally involved in active research or collaboration with business companies in the field of foam sclerotherapy, they were

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The President: J. Bergan.

The Panel of Vascular Experts: J. Bergan, A. L. Cabreragarrido, J. Cabrera, A. Cavezzi, P. Coleridge Smith, D. Creton, D. M. Eckmann, F. Ferrara, M. V. Forlee, A. Frullini, M. P. Goldman, R. Gonzalez Zeh, S. Guggenbichler, C. Hamel-Desnos, M. Izzo, A. Jawien, D. Jenkins, F. Mariani, N. Morrison, B. Partsch, H. Partsch, F. Passariello, A. Pieri, E. Rabe, P. Raymond-Martimbeau, M. Schadeck, A. Scuderi, M. Sica, L. Tessari, J. C. Wollmann, F. Xaver Breu.

Design and Review of the Survey: P. Raymond-Martimbeau and F. Passariello.

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all asked to clarify in written form their Conflict of Interest. In the organisation part of the Event, J. Bergan was democratically elected President with a great majority of votes. This democratic election is of course an undoubtedly almost unique feature of this Event. Finally, an extensive electronic Survey on Foam and PFO ² was submitted, in order to capture an instantaneous picture of the Phlebologists' opinions. The overall number of Participants and Vascular Experts was 84 and the great part of them actively joined the discussion. All documents, comments, messages, discussions, survey results, files, images and video files are archived and are freely available.¹

The discussion about M. V. Forlee case report,³ the starting point of this On Line Event, was unexpectedly limited to a few messages, maybe because this topic was previously clarified by the JVS discussions and by the Author's Short Comment to this Event.⁴ Forlee detailed that a 0.5% polidocanol 1-plus-4 20 ml solution was injected, producing foam with a 3 ways stopcock Tessari method, and that the patient had a SFJ terminal valve incompetence, with no incompetent perforator along the internal saphenous trunk. In other surgical contexts this could be classified as a Type I Shunt, though no cartography is available for an accurate study. Considering the symptomatic features of the

patient (migraine with aura, asthma, diabetes) and following I Tegernsee Consensus Conference recommendations,⁵ this patient could have been screened for a PFO. The big atrial defect (PFO+ASA, 18 mm) could then be easily detected and the patient selected for an alternative venous surgery (endovenous laser, radiofrequency, stripping, chiva). However, the reported case is very rare and doesn't affect Ultrasound Guided Sclerotherapy (UGS) practice.

Collateral effects (CE) data are inconsistent. CE practically are absent in many series, while in others a greater incidence decreases using preventive procedures after UGS. With a simple experimental protocol Bergan shows CE disappearing after leg elevation compared to supine leg position ($p < 0.000299$). Anyway, others have practically no CE without leg elevation or using high quality foam or physiologic-gas mixtures.

It looks like as CE disappearing could be obtained by a combination of several variables we are not able to control completely and consciously at the present time. Alternatively, data are simply not comparable or erroneously reported, so that it's difficult to find a common basis.

The following list was considered by the majority of people a complete set of preventive procedures, useful to reduce CE in UGS: leg elevation for 10', patient does not dress by himself, patient does not put on shoes and stocking by himself, avoid Valsalva, avoid constipation before procedure.

A PFO bubble screening test isn't generally considered necessary to perform an UGS, while the expert's opinion seems to restrict monitoring only to selected cases.

The following conditions were considered as a PFO alert before performing the procedure: migraine, dizziness, chronic mental damage or a previous cryptogenic cerebral ischaemia without atrial fibrillation in a <55 year old patient, low SpO₂ chronic pulmonary obstructive disease, regarded as a functional equivalent of PFO, as it can activate right to left anastomoses, other than a PFO.

As to exams, the patient was considered not screened if no exams were performed and no reports or reliable exams done elsewhere. As to atrial defects, they include also the ASA (Atrial Septal Aneurysm).

Patient's selection can be performed by anamnesis. No prevention in unscreened asymptomatic and in screened atrial defect negative patients, symptomatic

or not. Exclude symptomatic ASA+PFO. Vasculab participants exclude ASA+PFO asymptomatic and PFO symptomatic patients, while Foam_PFO participants suggest preventive procedures. For all other cases adopt preventive procedures.

The great majority of people in both lists agree that a complete venous carthography should be required before performing a foam UGS.

Foam is generally seen as a medical issue, so that the patient should be informed in the same manner as for liquid sclerotherapy, adding extra information's for PFO risk. However, as many preventive procedures require the patient collaboration, the informed consent should report that the patient has to help and not contrast the anti-Valsalva resting procedures. The aim is clearly to write a thoroughly designed informed consent, to guarantee the correct information's to the patient and a good defence for the physician.

There is no clear clinical or experimental evidence that severe neurologic effects derive from foam, while less important CE are variably rated in the most important case series. While a chronic cerebral damage trough PFO is a suggestive hypothesis, there isn't instead a clear evidence of acute cerebral effects from foam. There is only a dramatic case in 2006,³ another in 2004 not surely linkable to foam⁶ and another in 1994⁷ with liquid agents.

Whatever the meaning and the relative importance of CE, also without accepted guidelines, you can easily introduce in your daily practice *patient's selection*, *alternative (surgical) solutions* and *preventive measures*, adding eventually a *screening/monitoring procedure* and *high-quality foam*.

Though we are not able today to quantify the single effects of all these reported measures, nevertheless we could say with C. Hamel-Desnos that foam UGS is a very safe and effective method to treat varicose veins. Whether UGS is also the most proper and best kind of vein intervention is a question that only well conducted and impartial studies can clarify, going a step ahead in the direction of comparing all vein procedures: foam UGS, stripping, chiva, laser, radiofrequency, mixed procedures.

Finally, the discussion was very interesting and stimulating. We never had the chance to see all these experts together on line, expressing freely their ideas, without a time limiting constraint. I would like to thank the President J. Bergan, the Panel of Vascular Experts and all the participants of the Event, while a special

acknowledge must be given to P. Raymond-Martimbeau for her precious help in the design and review of the survey.² The contacts we had during the Event won't terminate and I invite all to remain tuned on (connected to) Vasculab, where it will be possible to organise and share new common experiences.

I was really honoured, having served as Moderator of a so stimulating and high quality discussion.

References

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