The first question is, do you have information about the entity of adhesion from this pleural irrigation in the case of reoperation? I have seen that you performed one reoperation. The second question is, if you have disease on the visceral pleura, besides the pleurectomy do you also perform decortication, and, if so, do you perform pleural irrigation? 

Dr. Belcher: Taking the questions in reverse order, yes, if the visceral pleura is involved, then an attempt is made to decorticate the visceral pleura, or, if suitable, a stapled wedge resection of that area.

Dr. Rea: And you also do pleural irrigation? 

Dr. Belcher: With the pleural irrigation again, yes, at a second stage, that’s right.

Regarding reoperation, I think reoperation after pleurectomy is difficult, it always is, but I don’t think that the iodine makes it any more difficult than it is already.

Dr. R. Cerfolio (Birmingham, Alabama, USA): The irritation is very interesting, so I want to revisit that question. We’re now doing some thymoma work robotically (the ones that you can tell you can resect) to decrease the morbidity, and although the robotic operation is spectacular, I still worry about spreading tumor cells, just like I worry when I do them open, and so we irrigate with water. Now, I’m not talking about your stage IVs, and I know you don’t have evidence-based medicine and data to answer this, so I’m really interested in your opinion. I’m giving you your chance here to give us your opinion. Would you recommend this type of irrigation for a thymoma that you have resected to help prevent drop metastases, and, if so, what about the reoperation and the adhesions from the Betadine? 

Dr. Belcher: You mean to irrigate centrally in the mediastinum? 

Dr. Cerfolio: At the end of the procedure, I have resected a 3 cm thyma and I want to irrigate the chest. Now, instead of just irrigating with warm water, as I have been, should we irrigate with warm water and Betadine, and, if so, what are the advantages and disadvantages? Just your opinion.

Dr. Belcher: I’m not sure of the advantages, whatever that will work. I don’t know. Obviously sometimes the IVA thyma isn’t actually in the pleural space, and if we’re only in the mediastinum, we haven’t opened the pleural space, then maybe it would prevent. 

Dr. Cerfolio: Well, if you are doing it robotically, you’re in one pleural space or the other, so you’re working in a pleural space.

Dr. Belcher: Yes, and I suppose that’s the most likely perhaps, then, to seed, yes. I would say that I don’t see any disadvantage to doing that. As I say, we use this routinely in all of our young pneumothorax patients. It adds very little time to the procedure. I think that there is one adverse incident reported in the literature. I think that there would be no disadvantage in doing it.

Dr. Cerfolio: What about the adhesions? What about the pleural symphysis that you would see from irrigating with Betadine? Don’t people use that as a sclerotherapy?

Dr. Belcher: They do. At Guy’s we undertake a lot of mesothelioma work. All of those patients have had talc pleurodesis. It’s a difficult operation, but I think it’s not impossible. If it stops some patients coming to the operation, then it would probably be worth persevering a bit longer in those patients.

Dr. Van Schil: Dr. Lang-Lazdunski, I think you want to make a comment on the use of this therapy as adjuvant therapy.

Dr. L. Lang-Lazdunski (London, UK): Just a comment, yes. You do sometimes see these thymoma patients who have had a biopsy done thoracoscopically and they come back with a pleural implant. So there is a real potential for the tumor to spread when you do a thoracoscopic biopsy, and in this instance I would strongly recommend the irrigation and the Betadine. I think abdominal surgeons have accumulated a good experience with peritoneal lavage and, considering that amount of evidence and the work of others like Walter Weder’s group in mesothelioma, with Betadine, it’s cheap, it’s easy, and honestly, I think you and he and most surgeons in this room can face abdominal surgeons have accumulated a good experience with peritoneal lavage and, considering that amount of evidence and the work of others like Walter Weder’s group in mesothelioma, with Betadine, it’s cheap, it’s easy, and honestly, I think you and he and most surgeons in this room can face the adhesions induced by Betadine if you have to reoperate. That’s never a big deal.

Dr. Van Schil: Would you consider the use of local chemotherapy irrigation? 

Dr. Cerfolio: At the current stage of our knowledge, I think chemotherapy is difficult. I think there are several complications — permanent renal failure, etc. When you put in balance Betadine and cisplatin, for me the choice is made already.

Dr. F. Detterbeck (New Haven, Connecticut, USA): I used to irrigate routinely with sterile water until I read a very well-done study that demonstrated that you had to leave cells in the water for at least 15 min or else it had absolutely no effect, and I’m sure that Rob Cerfolio doesn’t have that kind of patience. I know you left it in for 15 min, but do you think that with the Betadine this is not necessary?

Dr. Belcher: I don’t know of any evidence of time to effect really.

Dr. Detterbeck: Well, it would be an easy study to do. Just get some cells and put them in a dish and see what happens in 2 min and 15 min.

Dr. L. Lang-Lazdunski: There were three cases of permanent blindness reported with Betadine in the New England Journal of Medicine, but honestly, I’ve been using Betadine for 20 years for irrigation of the pleural space after pleural abrasion and I’ve never seen such a complication.

Dr. M. Lucchi (Pisa, Italy): I have a comment about what Dr. Cerfolio said, because if he has concerns about pleural seeding from thymoma, as I also do, I think that we should discuss whether a transpleural approach to the thymoma is right or not, first of all. Second, in my centre we are also using intrapleural chemotherapy for pleural relapse from thymoma, but I have some concerns when you do an extended resection, because when you do intrapleural chemotherapy, you will do the washing and there will be some pressure, and I’m sure that some fluid goes through the diaphragm to the peritoneal cavity, and I have already seen some cases of peritoneal relapse or retroperitoneal metastasis. So I’m not sure in cases where you are doing a diaphragm resection that intrapleural Betadine irrigation is the right way.

Can you comment on that?

Dr. Belcher: I think once you’ve decided that the diaphragm is involved and therefore there’s potential for a communication between the two cavities, and whether you seed with blood that’s spilled at the time of surgery or whether you wash with water or Betadine, I think there is always a chance that you will seed into that second space, but at least if you are washing with Betadine, hopefully you are at least necrosing some of those cells that would undoubtedly pass through that diaphragmatic space.

eComment: The crucial role of multimodality management of stage IV thymoma

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We read with great interest the article by Belcher et al. [1] describing their experience in multimodality treatment of stage IVA thymoma. This is a very controversial issue and, to date, only a few series [2–3] have investigated the role of surgery as part of multimodality treatment, the exact choice of surgical procedure being an ongoing challenging subject of debate. The authors reported very interesting results of this experimental multimodality protocol, especially in terms of morbidity and survival. Nevertheless the selection criteria of the population (six patients) seem to be not completely adequate. Indeed, as reported by the Authors, ‘three patients had previously undergone surgery to resect thymomas …’ and, therefore, they were affected by a recurrent thymoma and reassigned as Masaoka stage IV for pleural dissemination. This confounding information could heavily influence data analysis (clinical selection bias), the survival outcomes of the recurrent thymomas being substantially different from the initial stage IVA. On the other hand, the good results in these three cases of recurrent thymoma seem to suggest, as previously reported [4], the feasibility and effectiveness of the iterative surgery in the management of thymoma recurrence. Apart from this selection bias, the article offers the reader valuable information about stage IVA thymoma treatment. When surgery aimed at total removal is performed for stage IVA thymoma, a ‘complete resection’ (defined as macroscopically complete resection of pleural dissemination) is very rarely achieved and even after ‘complete resection’, the recurrence rate is very high, ranging from 33% to 80% [5]. Inspired by this topic, we have reviewed our long-term database of surgically treated thymomas, finding a 71.4% recurrence rate (10 of 14 cases) in IVA thymoma patients with a particular recurrence pattern (80% pleural recurrences). These data clearly suggest that surgical ‘complete resection’ for pleural dissemination is a considerably uncertain procedure. In this setting, all the complementary therapies, such as intraoperative hyperthermic pleural irrigation, take on a particular relevance in order to achieve better local control. For this reason, and based upon the data we have reported, we promote further investigations and warmly advocate the validation of multimodality treatment in stage IVA thymoma.

References


