

EBJIS 2017 Travel Fellowship Report

By

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In general the fellowship was of very high quality and all of us had a very positive experience. The reception we received at all the units were both very friendly and very professional and we felt very welcome at each of the centres. Though the itinerary was quite compact, each centre brought new experiences and added something new. Finally, some of the changes suggested by previous fellows such as providing the itinerary months before and increasing the size of the stipend made taking care of travel arrangements that much easier.

Pre-fellowship:

Elenida Shkarpa provided a wealth of information and was extremely forthcoming in providing suggestions for the logistical aspect of the trip. We also split the itinerary, so that each of us was responsible for arranging travel and accommodation for a designated country. The information concerning the actual programme was also very accurate and included all the required information. Further, the composition of the team was also very appropriate and we thoroughly recommend that the composition of the fellows, if possible, reflect the multidisciplinary nature of PJI treatment. Travelling together gave many opportunities for discussing the different specialties approaches to bone and joint infections. Many interesting scientific discussions arose during the trip and as such, we can only fully recommend a multidisciplinary team for the fellowship, if the background of the applicants can allow it.

Fellowship:

The different centres and their methodology are addressed on the following pages. We were made to feel welcomed by all the hosts and their colleagues. Overall, as stated, each

centre added something new and interesting. Some centres were very focused on algorithms and guidelines and the product of this approach was readily accessible.

As one of the fellows was not a surgeon, several centres made ad hoc adjustments to include more time with the units ID staff. This was greatly appreciated. The surgeons on the fellowship scrubbed in for surgeries several times and this added to the educational value of the visits..

Our only major suggestion would be to consider whether or not 4 units in 14 days is realistic – especially as some of the units have weekends included, during which OR and clinics close down. Some of the centres also suggested 3 centres for 14 days would be more appropriate, as the centres would get to know the fellows better.

In summary, we are very grateful to EBJIS for this unique educational opportunity which has not only further increased our enthusiasm for the management of osteoarticular infections, but has also enabled us to meet world experts in the field and forge links for future collaborations.

Key observations from the individual centres:

1. Slovenia, Ankaran- Valdoitra Orthopedic Hospital (Dr Rihard Trebše)

- Purely an orthopedic hospital (16 beds for septic surgery) with approx. 90 osteoarticular infections annually (60 PJI)
- All Slovenian cases of osteoarticular infections are reviewed by the team at Valdoitra (clinicians are not obliged to follow recommendations)
- Team: orthopedic surgeons & a clinical pharmacologist
- Algorithmic and structured approach to PJI – strict adherence to treatment protocols
- Low MRSA incidence and very low MDRO incidence (most from tertiary referrals)

- Ciprofloxacin and rifampicin to all *S. aureus* OA-infections
- Patient's prescriptions are revised by the pharmacologist to ensure that the patient can tolerate rifampicin treatment.
- Great emphasis on obtaining good samples for culture which was reflected by the low rate of culture-negative infections

2. Switzerland, Lausanne- CHUV (Prof Olivier Borens)

- Multidisciplinary team with robust scientific activity
- 20 beds for septic surgery – in principle patients from all types of surgical departments can be admitted, but the majority of patients are from the orthopaedics department.
- Joint ward rounds by orthopedic surgeons, ID specialists, physiotherapists and residents from the relevant specialities
- Diagnosis and treatment strategy is based on Zimmerli algorithms.
- Surgical therapy is either DAIR or 2-stage (short interval if the soft tissues permit it).
- *Custom made* spacer, tailored for each patient with personalized antibiotic regime
- No antibiotic holiday between stages in 2-stage surgeries (regardless of duration of interval between)
- Low incidence of MRSA, which is reflected in anti-staphylococcal therapy with a

3. Italy, Milano- Galeazzi Orthopedic Institute (Dr Carlo Romano & Prof Lorenzo Drago)

- Private orthopedic hospital

- Multidisciplinary team: orthopedic surgeons and microbiologists. For patients who experience internal medicine related issues during admission, infectiologists at a sister hospital can be contacted.
- Modified MSIS definition for PJI
- Prefers 2-stage, always long interval between stages (2 months at least). Cessation of antibiotics 4 weeks prior to surgery.
- Following surgery, empirical treatment/pathogen tailored antibiotics are started. After 5 days of treatment it is stopped, if the operative cultures are negative
- A lot of scientific activity on alpha-defensin test, antibiotic-loaded hydrogels & DTT bags for diagnostics. The unit has a biofilm lab attached, which does extensive genomic and microscopic analysis of biofilms.

4. Spain, Barcelona- Hospital Clinic of Barcelona (Dr. Guillem Bori & Dr. Alejandro Soriano)

- For diagnosis, the unit uses modified MSIS criteria. Quite similar to Galeazzi.
- Preference one-stage if at all possible.
- Aggressive prophylaxis for septic surgery to prevent contamination of sterile tissues doing surgery (meropenem and linezolid).
- After 6 weeks, antibiotic therapy is always discontinued, and if necessary, further surgical treatment initiated based on recurrence of PJI.
- Decolonization of *S. aureus* carriage (mupirocine) prior to surgery
- Screening of females for asymptomatic bactiurea. If cultures grow bacteria, patients are treated prior to surgery as the unit has found a higher infection rate in female patients with asymptomatic bactiurea.

| | Valdotra | CHUV | Galeazzi | Clinic Barcelona |
|-------------------------------------|--|---|---|---|
| PJI MDT composition | Orthopedic surgeons, clinical pharmacologist | Orthopedic surgeons, plastic surgeons, infectious diseases specialist | Orthopedic surgeons, , clinical microbiologists | Orthopedic surgeons, infectious diseases specialist |
| Beds(surgical) | 16 | 20 (ekstra i traume) | ? | approx. 15 |
| PJI definition | Zimmerli (modified) | Zimmerli (modified) | MSIS (<i>soft</i>) | MSIS (<i>soft</i>) |
| Sonication | Gold Standard | Gold Standard (| DTT bag | Routine (<i>indikation</i>) |
| Mainline anti-staphylococcal | Cipro/levo + rifampicin | Flucoxacillin + rifampicin | Cipro + rifampicin | Cipro/ levofloxacin + rifampicin |
| MRSA rate | 2% | 5% | 18-19% | 20% |
| National reference center | Yes (<i>administrativel y</i>) | De facto | De facto (40% af patients) | No(<i>regional reference center</i>) |

| | Valdotra | CHUV | Galeazzi | Clinic Barcelona |
|----------------------------|--|---|---|--|
| Cases (PJI) | 90 (70) | 80 PJI | 400 (150-180) | 230 (200) |
| DAIR | 60% | 30% | 15% | 25.5% |
| One-stage | 10% | 15% | 10% | 60 % |
| Two-stage | 30% | 40% (short)/ 15% (long) | 70% | 8% |
| Time between stages | 4-12 weeks (2 week AB holiday) | Favours early (2) / 6 weeks (No AB holiday) | 4 weeks AB 4 weeks break | <i>2 stage practically phased out</i> |
| Aspiration | CT | X -ray | CT | CT |
| Biomarkers | CRP (P), ESR (P), PCT (P), celletal (SF) | CRP (P), ESR (P), PCT (P), celletal (SF) | CRP (p), ESR (p), PCT (p), ADT (stuedie), cell count (SF) | CRP (P), ESR (P), PCT (P), cell count (SF) |
| Growth negative | 5% | >10% | 20-25% (40% af patienter er henviste) | |