Post-Embolisation Syndrome
The Achilles' Heel of IR?

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Embolisation offers amazing possibilities to patients and practitioners. In many fields, from cancer to trauma bleeding to treatment of fibroids, embolisation has improved the health and lives of countless grateful people. It helps shorten hospital stays, recovery periods and time off work – so what then, could there possibly be to object to?

Post-embolisation syndrome (PES) is one of the few adverse reactions of embolisation, but with so much conflicting opinion on it, it is hard to know how much of a consideration it is when deciding which therapy to follow. IQ spoke to renowned expert, Dr. Ricardo Garcia-Monaco, on what post-embolisation syndrome is, and how it can be best managed.

"Post-embolisation syndrome is a side-effect of an embolisation procedure. Not every patient will have PES. It is estimated to occur in 30-100% of patients – and the large discrepancy is down to how you define it. I would estimate that a third experience adverse symptoms. Most patients will experience mild symptoms, such as a small rise in temperature, and once a mild antipyretic is given, the patient feels fine. So in that case, the symptoms are not a problem. But some patients do have a lot of pain, vomiting, fever and loss of appetite. The typical symptoms are mild flu-like symptoms."

Why PES occurs

"That this should happen is perfectly normal. Embolisation causes tissue ischaemia, which produces inflammation, which causes the body to produce defence proteins (cytokines). Cytokines are what cause the fever and pain. It is a natural response. But although it is not dangerous, we like to make the patient as comfortable as possible, so depending on the symptoms we give anti-inflammatory drugs or antipyretics. It is just symptomatic treatment."

Only one night in hospital

"These symptoms usually appear after 24 or 48 hours, when the patient is back home. And it will last for several days, usually three or four days, but possibly up to two weeks. When we started doing chemoembolisation 20 years ago, we kept patients in for three to five nights, as we didn't know what outcomes to expect. Now, if the patient is doing well, which almost all are, we send them home after one night. We warn them what symptoms to expect, and give them medication to take. We check up on them via telephone, and if there is anything unusual, we get them to come back in, but only 2-3% will ever be readmitted. Our complication rate is very low. What is important is to inform the patient and their GP of this possibility, otherwise their doctor could wrongly diagnose infection and prescribe unnecessary antibiotics."

How to differentiate between PES and Infection:

PES
- PES begins hours after embolisation
- Peaking at 24-48 hrs
- Lasts several days
- Main concerns for patient
  – Asthenia; Fever

Infection
- Fever starts 7-15 days after embolisation
- Fever persists >39°C
- Chills, malaise, etc.
- Clinical deterioration
- Blood culture +
- Imaging +

Bigger is better?

"PES is not very well studied, and there is contradictory data, but from my own personal experience, the more aggressive you are in embolising the target, the greater the possibility of an inflammatory pain response. Although not proven, there also seems to be a greater probability of PES if healthy tissue is embolised. So theoretically, top-end imaging equipment could, through reducing non-target embolisation, also reduce PES."

The overwhelming benefits

"Although some doctors argue that this side-effect is a major reason for patients to avoid embolic treatments, it must be remembered that this pain is still much less than post-operative pain. More importantly, it can be very easily controlled, and is not dangerous. Patients still benefit from shorter recovery periods and fewer adverse effects. With good management, the majority of patients will not suffer any major adverse effects from embolisation."
C.M.

Post-Embolisation Syndrome Symptoms
- Pain
- Nausea, vomiting
- Fever <39°C
- Weakness (asthenia, adynamia), loss of appetite
- Abdominal disturbance (adynamic ileus)
- Lab & imaging changes
  – Leukocytosis, gas in target organs, etc.