



Inflammation and MPNs: What's the Connection?

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Bart Scott, MD

Director, Hematology and Hematologic Malignancies
Seattle Cancer Care Alliance

David Snyder, MD

Associate Chair, Hematology & Hematopoietic Cell Transplantation
City of Hope

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Robin:

Hi. I'm Robin Finkelstein, and I just want to say thank you all for being here. It's meant a lot to me personally. I appreciate it. My question is on inflammation. I've heard you talk about MPNs being inflammatory diseases, and I just wonder if you could sort of expound upon on that.

And I'm just really wondering what inflammation looks like inside of our bodies, and is there anything that we can do to reduce the inflammation?

Dr. Scott:

I know. I can go.

Dr. Snyder:

You go.

Dr. Scott:

Okay. I guess I'll go. So, inflammation, it is a broad concept, but these JAK-signaling cascades, in particular JAK1, leads to enhanced production and release of several different cytokines. Things like interferon, for instance, and basically what these cytokines do is they stimulate your immune system cells.

But they can also stimulate other cells in your body as well. I mentioned that they likely have, well not likely, I do think it's been proven that they have a role in the pathogenesis of thrombosis.

So they cause inflammation of the endothelial cells themselves, which increases their reactivity with platelets, which then enhances the potential thrombotic events.

I believe that the enhanced cytokine production is an important component of the pathogenesis of weight loss that patients experience, of the night sweats that they experience, of the pruritus that they can experience. It's been mentioned several times about how people can get into showers, and they can develop pruritus and itching because of that.

I've had patients who actually have difficulty sleeping period, because they're itching so bad they can't really sleep at night. So these cytokines and this inflammatory component accounts for a lot of the symptomology that patients have.

And the message that I try to send, when I give these educational sessions, is not to be so focused on the numbers. I mean the numbers are important. We talked about how you want to keep the hematocrit less than 45.

But we also talked about measuring other things, particularly when it comes to phlebotomy, like these cytokine storms that patients can experience or cytokine symptoms. So it's not just a disease of numbers. It's also a disease of inflammation. Did that answer your question?

Andrew Schorr:

Any other comment from you? You're good on that?

Dr. Snyder:

The way that you think of them, what the JAK inhibitors do then is that it's not, as Dr. Scott, it's not just affecting the numbers or the fibrosis, but it may be impacting those cytokine pathways as well reducing these pro-inflammatory molecules in the body and helping you feel better.

Dr. Scott:

Which is why, if you suddenly stop it, you can get this cytokine storm and experience a lot of symptoms, which is why we were recommending it's probably better to taper off if you have that opportunity to do so.

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