

BACKGROUND:

Hidradenitis Suppurativa (HS) is a long-term inflammatory skin condition which causes painful lumps and boils. Symptoms can last for decades, primarily affecting the armpits and groin. The exact cause of HS is not known, but current research indicates that it is a combination of genetic and environmental factors. Prevalence varies, affecting as much as 1% of the population in Europe, and generally more common among people in their 40s and 50s. In addition to the pain caused by this condition, it can also be socially isolating, with attending mental health implications.

There is no known cure for HS. A wide variety of treatments are in use, which vary from lifestyle changes to surgery, often depending upon the severity of the individual's condition. There is some evidence that biologic medications, particularly adalimumab and secukinumab, are effective, but decisions about when or whether to prescribe these remain a challenge for clinicians.

RESEARCHER QUESTION:

Alexa Kimball is a professor of dermatology at Harvard Medical School, with a research focus on psoriasis and hidradenitis suppurativa. For this project, Dr. Kimball's



team investigated whether identifying biomarkers such as C-reactive protein (CRP) could help clinicians decide on whether or when to begin or escalate biologic therapy.

"...Getting access to a data set like this is remarkable. . .it's an amazing resource- Dr. Alexa Kimball

RESULTS

In completing this analysis, the research team was able to establish that HS patients experiencing anemia and other blood level abnormalities due to inflammation improved with treatment, confirming the abnormalities were related to HS. They were also able to confirm that improvements in CRP correlated with overall improvements in disease symptoms, and that CRP levels could assist clinicians in determining which patients were likely to respond or not to available interventions.

IMPACT

This research has been published in several journals, including *JAMA Dermatology*. As Dr. Kimball said in discussing this research: "These papers will have substantial impacts on patient care in this domain....It really shows the value of having that information available."

RESEARCH PROCESS:

The research process focused on HS patients whose symptoms improved with adalimumab, and whether these improvements were also reflected in changes to CRP and other blood abnormalities linked to inflammation. A corresponding improvement could support the hypothesis that positive changes in systemic inflammation mirror improvements in skin disease. Dr. Kimball's team assessed clinical trial data from two phase III, double-blinded, randomized-controlled trials, PIONEER I and PIONEER II. Researchers examined individual patient data from nearly 600 participants.

NEXT STEPS:

READ MORE

[Effects of adalimumab on inflammation-associated abnormal hematologic patterns in patients with Hidradenitis Suppurativa](#) (Vivli Research Request 7127)

[C-Reactive Protein and Response to Adalimumab in Patients With Hidradenitis Suppurativa](#) (*JAMA Dermatology*)

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