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A Brief Note on Vasectomy Techniques

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SUMMARY

BRIEF NOTE

One of the best-understood inflammatory processes involving joints in humans is crystal-associated arthritis. It primarily affects middle-aged or elderly people and is frequently noticed in conjunction with indications of degenerative joint disease. Crystalline deposition illness articular symptoms are frequently the first sign of reversible metabolic or endocrine diseases. Synovial fluid analysis is an essential field for clinicians since it allows them to make a diagnosis quickly and correctly. Furthermore, colchicine, nonsteroidal anti-inflammatory drugs, or intra-articular corticosteroid injections can be used to effectively manage acute symptoms. Long-term hypouricemic therapy can also help with the chronic signs of gouty arthritis

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INTRODUCTION

The clinical identification of crystals is critical in the diagnosing process. As a result, a fundamental understanding of crystal structure is essential. To have a better understanding of the most widely utilised diagnostic techniques. Crystals are solids of determinate form in which the atomic units are arranged in a three-dimensional lattice in a regular and repeated fashion. This internal symmetry and development pattern influence the crystal's exterior shape, resulting in facets that vary depending on the crystal and often provide typical microscopic looks. A single crystal can exist in many different of shapes and symmetries: Cubic, tetragonal, orthorhombic, monoclinic, triclinic, and hexagonal crystals are the six fundamental classifications based on their internal structure and exterior form.

The diffraction of X-rays is enabled by this ordered array of atoms, allowing for a precise measurement of a crystal's interior structure. X-ray diffraction is a crystallographic technique that is often used to investigate the shape, structure, and aggregation of crystals. Crystals have comparable qualities to light, allowing them to be identified clinically using techniques like polarised light microscopy. Other more sophisticated analytical techniques used in crystal identification include analytical electron microscopy and electron microprobe examination of calcium to phosphorus molar ratios. Urate crystals are needle-shaped, extremely negatively birefringent structures when seen with polarised light microscopy. Calcium pyrophosphate crystals can be needle like and similar in size to urate, although their shape is more varied and they are only slightly positively birefringent.

Gout and pseudogout are the two primary inflammatory arthropathies defined by the development and deposition of Monosodium Urate (MSU) and Calcium Pyrophosphate (CPP) crystals in the joints, respectively. Basic Calcium Phosphate (BCP) crystals, a third form of crystal, are linked to calcific periarthritis, osteoarthritis, and destructive arthropathies. The major characteristics of CIA are similar to those of monogenic autoinflammatory syndromes, such as spontaneous onset, recurrence of episodes, self-limitation and resolution, inflammasome activation with high IL-1 production, and innate immune involvement. Gout and pseudogout are categorised as "type-1 autoinflammatory diseases" despite the fact that no single genetic causes, but rather multi-genetic predispositions, have been linked to CIA.

The variables that cause articular crystal build-up and their significance in the development of joint illness have gotten a lot of attention. Despite the fact that the disorders produced by different crystals are diverse, the biochemical and

cellular interactions that cause acute crystal arthropathies are comparable, implying a common pathogenetic process.

It is widely believed that a crystal's solute excess is required for intraarticular deposition, however this may necessitate changes to the articular connective tissue matrix. Crystals are typically found in the connective tissues of joints, often decades before acute arthritis develop. Synovium, cartilage, joint capsule, and periarticular tissues such as tendon, ligament, and bursa may all contain them.

Acute inflammation is caused by the ejection of crystals into the joint cavity. This crystal discharge could be the consequence of de novo precipitation in response to a spike in serum uric acid or the rupture of pre-existing deposits in synovium and cartilage. Crystals may be lost as a result of local trauma, surgery, pharmacological therapy, severe sickness, or other events that make the intraarticular deposits more soluble. Rodnan discovered that the quick reduction of serum urate after its increase, rather than the absolute quantity of serum urate, correlated with acute intraarticular urate crystal formation. As a result, there is no simple relationship between serum uric acid levels and the presence or number of crystals in synovial fluid throughout a gouty attack.1-5

The authors declare no competing interests.

All authors declare that the material has not been published elsewhere, or has not been submitted to another publisher.

DATA AVAILABILITY

Authors declare that all related data are available concerning researchers by the corresponding author's email.

REFERENCES

1. Rajagopala SV, Vashee S, Oldfield LM, et al. The Human Microbiome and Cancer. Cancer Prev Res (Phila). 2017;10(4):226-234.
2. Walther-António MR, Chen J, Multinu F, et al. Potential contribution of the uterine microbiome in the development of endometrial cancer. Genome Med. 2016;8(1):122.
3. Sweet RL. Gynecologic conditions and bacterial vaginosis: implications for the non-pregnant patient. Infect Dis Obstet Gynecol. 2000;8(3-4):184-90.
4. Gillet E, Meys JF, Verstraelen H, et al. Association between bacterial vaginosis and cervical intraepithelial neoplasia: systematic review and meta-analysis. PLoS One. 2012;7(10):e45201.
5. Fang RL, Chen LX, Shu WS, et al. Barcoded sequencing reveals diverse intrauterine microbiomes in patients suffering with endometrial polyps. Am J Transl Res. 2016 Mar 15;8(3):1581-92.