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Letter to the Editor

Autologous platelet concentrates in periodontal therapy: A public health perspective

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Periodontal disease remains one of the most prevalent chronic conditions worldwide, affecting nearly 50% of adults and contributing to systemic health complications such as diabetes, cardiovascular disease, and adverse pregnancy outcomes. Despite its widespread impact, periodontal disease is often underrepresented in public health discourse. As we move toward biologically driven and patient focused care, Autologous Platelet Concentrates (APCs) including Platelet-Rich Plasma (PRP) and Platelet-Rich Fibrin (PRF) have emerged as promising regenerative tools in periodontal therapy. Their clinical efficacy in enhancing wound healing, promoting bone regeneration, and accelerating soft tissue repair has been well documented, yet their broader public health implications remain underexplored.

From a public health standpoint, APCs offer a unique opportunity to bridge clinical innovation with equitable care delivery. Derived from the patient's own blood, APCs minimize immunogenic risks and eliminate the need for expensive biomaterials, making them particularly suitable for resource-constrained settings. Their cost-effectiveness and safety profile position them as viable adjuncts in community-based periodontal programs, especially in underserved populations where access to advanced dental care is limited.

Moreover, integrating APCs into preventive oral health strategies could significantly reduce the burden of chronic periodontal disease. By enhancing tissue regeneration and reducing disease progression, APCs may contribute to lowering the incidence of systemic comorbidities linked to oral inflammation. This aligns with the broader goals of preventive medicine and supports the inclusion of oral health in universal health coverage frameworks.

However, several challenges must be addressed before APCs can be scaled effectively within public health systems. First, standardization of clinical protocols is essential to ensure reproducibility and safety across diverse practice settings. Variability in preparation techniques, centrifugation parameters, and application methods can influence clinical outcomes and hinder widespread adoption. Second, training and awareness among dental professionals and public health practitioners must be prioritized. Many clinicians remain unfamiliar with APC technologies, and their integration into routine practice requires targeted education and capacity-building initiatives.

Third, ethical considerations surrounding informed consent and patient autonomy must be carefully navigated. While APCs are autologous, patients should be adequately informed about the procedure, its benefits, limitations, and potential risks. Transparent communication and shared decision-making are critical to maintaining trust and upholding ethical standards in clinical care.

Finally, robust research is needed to evaluate the long-term effectiveness, scalability, and cost-benefit ratio of APCs in public health contexts. Large-scale trials and health economic analyses can provide the evidence base necessary for policy integration and funding support.

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In conclusion, Autologous Platelet Concentrates represent more than a clinical innovation they embody a shift toward regenerative, accessible, and preventive periodontal care. Their potential to improve outcomes in marginalized communities, reduce systemic disease burden, and align with public health priorities makes them a compelling candidate for inclusion in national oral health strategies. As we strive for equity and innovation in dental medicine, APCs may well become a cornerstone of biologically driven public health interventions.

Sincerely,

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