

# Abstracts of the First Conference of Pharm D Clinical Pharmacy Students Faculty of Pharmacy Beni-suef University

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Volume number 3 Issue number 4 Pages 96-100

10.61466/ijcmr3040002

Received: 18.06.2025 Accepted: 19.06.2025 Published: 19.06.2025 Online: 01.08.2025

# Awareness, Attitudes, and Practices Toward Drug Interactions and Adverse Drug Reaction Reporting Among Healthcare Professionals in Egypt: A Cross-Sectional Study

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#### **Abstract**

# **Background**

A major public health concern and a major contributor to avoidable adverse drug events (ADEs) are drug-drug interactions (DDIs). Even with pharmacovigilance systems in place, ADE underreporting is still remarkably high. Healthcare professionals frequently provide the first line of defense in recognizing and reporting these incidents, but many are either underprepared or ignorant of the proper protocols. Since DDIs can result in hospitalization, higher medical expenses, and even death, practitioners must be vigilant and mindful

#### **Objective**

The purpose of this study is to assess Egyptian healthcare professionals' awareness, attitudes, and practices regarding ADRs and DDIs. Our goal is to suggest solutions that improve pharmacovigilance culture by evaluating perceived barriers, common practices, and knowledge levels.

# Methodology

Using a structured and validated questionnaire, 175 healthcare providers participated in a cross-sectional survey. Demographic information, DDI knowledge, ADR reporting experience, and improvement recommendations were all gathered through the survey. Clarity and viability were established by a preliminary pilot study with 10 participants. Content's validity was ensured through Expert review. Descriptive statistics and inferential testing, such as chi-square analysis and thematic review of open-ended responses, were used to analyze the data.

# Results

68% of the total pharmacists were the largest professional group. The participants' self-rated knowledge of DDIs ranged from moderate (36 %) to high (35%). Nevertheless, only 49% were aware of institutional reporting systems, and 42% knew where to locate ADR reporting forms. The majority used mobile medical apps such as GeneBrandex and Medscape. Knowledge level was found to be statistically significantly correlated with years of experience (p = 0.001) and job title (p = 0.023). Time constraints, a lack of interprofessional cooperation, inadequate training, and ignorance of ADR procedures were major obstacles.

# Conclusion

Despite the heavy reliance on digital resources, there are still gaps in interprofessional communication and institutional ADR reporting. Pharmacovigilance can be greatly improved by fortifying training initiatives, incorporating electronic reporting systems, and cultivating a cooperative culture.

Effect of different vitamin B12 formulations in patients with peripheral neuropathy: a cross-sectional study Marwa Mohsen<sup>1</sup>, Marina E. Boules<sup>1</sup>, Mariam M. Abdelbaset<sup>2</sup>, Mahmoud A. Ahmed <sup>2</sup>, Mariam K. Hussein <sup>2</sup>, Wafaa S. Ezzedine <sup>2</sup>, Yara K. Mohammed <sup>2</sup>, Nourhan B. Mohammed <sup>2</sup>, Mo'mn M. Alsayed <sup>2</sup>, Manar Elsayed <sup>2</sup>, Mustafa M. Abohamra<sup>2</sup>, Heba M. Ragab <sup>2</sup>, Menna Allah M. Ayesh <sup>2</sup>, Howaida E. Abdalwally <sup>2</sup>, Yasmeen S. Taha<sup>2</sup>, Mona A. Abdelrahman<sup>1</sup>

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### **Abstract**

# **Background**

Vitamin B12 is a water-soluble vitamin essential for nerve myelination, CNS function, and red blood cell formation. Vitamin B12 deficiency is one of the most common causes of peripheral neuropathy, along with diabetes, autoimmune diseases, and drug-induced factors. Supplementing vitamin B12 can relieve neuropathic symptoms. Various dosage forms are available, including IM injections, oral tablets, sublingual tablets, and oral disintegrating patches.

# **Methods**

A cross-sectional online survey of 135 participants was conducted in Egypt (March-May 2025) to explore different forms of vitamin B12 supplementation and their impact on patients with peripheral neuropathy. Data were collected via a bilingual questionnaire distributed through social media, covering demographics, supplement type, dosage, formulation preferences, and medical follow-up.

#### Results

Among different vitamin B12 formulations, oral supplements were the most commonly used form (28.8%). There was a great improvement, although insignificant, in numbness with oral supplements (63.6%) compared to other dosage forms. In addition, a statistically significant improvement in tingling sensations was noticed with injectable vitamin B12 compared to combined oral and injection forms (p= 0.012). Gastric upsets and unpleasant taste were significantly associated with oral vitamin B12 supplementation compared to other dosage forms (p=0.048, 0.010, respectively). Weekly vitamin B12 supplements have significantly improved sleep quality compared to monthly regimen (p=0.010). Lastly, the monthly regimen of vitamin B12 supplement showed significantly lower patient tolerability (mean = 4.13 ± 3.18) compared to daily and weekly regimens (mean 87.5 ±3.17 and 19.6 ±2.40 respectively).

# Conclusion

Injection supplementation significantly improved tingling sensation, while oral vitamin B12 was more effective for numbness compared to other forms. Gastric upsets were more associated with oral vitamin B12. Weekly vitamin B12 dosing led to greater sleep quality improvement than monthly dosing.

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# Exploring the potential of probiotics in ulcerative colitis treatment: a review article

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# **Abstract**

# **Background**

Ulcerative colitis (UC) is a chronic inflammatory bowel disease characterized by recurrent inflammation of the colonic mucosa, especially affecting children and adolescents. Conventional therapies often have adverse effects and limited long-term efficacy. This review explores the therapeutic potential of probiotics in UC treatment, highlighting their mechanisms of action, including restoration of gut microbiota balance, strengthening of the intestinal barrier, immune modulation, and inflammation inhibition. Specific strains of Bifidobacterium and Lactobacillus demonstrate promising effects in both animal and clinical studies, although efficacy varies by strain and condition. While probiotics are generally safe and well-tolerated, more rigorous clinical trials are needed to establish their role, particularly in pediatric populations, as adjunctive therapies for managing UC.

#### Methods

This review was conducted by systematically examining peer-reviewed experimental and clinical studies published between 2018 and 2024 that investigated the role of probiotics in ulcerative colitis (UC). Key databases such as PubMed, Scopus, and Web of Science were searched using terms like "probiotics," "ulcerative colitis," "Bifidobacterium," "Lactobacillus," and "inflammatory bowel disease." Inclusion criteria focused on studies evaluating probiotic strains' effects on intestinal barrier function, immune modulation, microbiota composition, and clinical outcomes in UC. Both animal models and human trials were considered. Emphasis was placed on strain-specific outcomes, mechanisms of action, and relevance to pediatric UC management.

#### Results

Numerous strains from the *Bifidobacterium* and *Lactobacillus* genera demonstrated beneficial effects in UC models. Mechanisms included restoration of gut microbial balance, suppression of pro-inflammatory cytokines (e.g., TNF-α, IL-6), enhancement of epithelial barrier integrity via tight junction proteins, and modulation of both innate and adaptive immune responses. Specific strains such as *B. longum*, *B. lactis*, *L. plantarum*, and *L. rhamnosus* showed the most consistent benefits. However, clinical evidence in pediatric populations remains limited and strain-dependent.

# Conclusion

Probiotics offer a promising adjunctive strategy for UC management, particularly due to their ability to modulate gut microbiota, strengthen the intestinal barrier, and regulate immune activity. While preclinical studies are encouraging, the therapeutic efficacy of probiotics is highly strain-specific. Rigorous, large-scale clinical trials are needed to validate these findings, optimize strain selection, and define their role in pediatric UC treatment protocols.

# Sample Abstract - Narrative Review on "Post Finasteride Syndrome (PFS)"

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### **Abstract**

# **Background**

Finasteride is a 5α-reductase enzyme inhibitor used for androgenic alopecia and in BPH in males by the conversion of testosterone into its more potent derivative, dihydrotestosterone (DHT). DHT plays a significant role in the shrinkage of hair follicles, leading to progressive hair loss and eventually cessation of hair growth.

Over the past decade, reports have emerged detailing adverse reactions associated with finasteride that have persisted for a minimum of three months following drug discontinuation. This condition, termed post-finasteride syndrome (PFS)

To review the current understanding of post-finasteride syndrome (PFS), its clinical manifestations, potential pathophysiological mechanisms, and the challenges in diagnosis and management, highlighting its emergence as a significant clinical concern.

#### Methods

This review was conducted by systematically examining peer-reviewed experimental and clinical studies published between 2000 and 2024 that investigated Post-Finasteride Syndrome (PFS). Key databases such as PubMed, Scopus, and Web of Science were searched using terms like "Post-Finasteride Syndrome," "finasteride side effects," "persistent sexual dysfunction finasteride," and "neurosteroid deficiency finasteride." Inclusion criteria focused on studies evaluating the prevalence, symptoms, proposed mechanisms, and potential treatments for PFS.

### Results

Mechanisms: 5α-reductase inhibition reduces DHT, alters gene expression (SRD5A2↓, AR↑), and depletes neurosteroids (e.g., allopregnanolone). Efficacy: Improves BPH (30–50% symptom reduction) and hair loss (48% regrowth at 1 year); effects reversible upon discontinuation. Side Effects: Common (sexual dysfunction, mood changes); rare PFS cases show persistent symptoms. Gaps: PFS pathophysiology (epigenetic, neuroinflammatory) and prevalence remain unclear.

#### Conclusion

Finasteride benefits outweigh the risks for most, but PFS warrants further research.