The Effectiveness of Combined Ethanol Root Extracts of Terminalia avicennioides, Terminalia superba, and Seeds of Hunteria umbellata on Paroxetine-Induced Erectile Dysfunction in Male Wistar Rats.

Chinenye Ogbu Angela¹ Joy Okpuzor²

¹Nigerian Institute Of Medical Research, Yaba, Nigeria, ²University of Lagos, Yaba, Nigeria
Introduction: Erectile dysfunction (ED) has posed problems among several married couples. Following the reports on the usefulness of some plants in amelioration of ED, this study, therefore, evaluated the efficacy of combined ethanol root extracts of Terminalia avicennioides, Terminalia superba, and seeds of Hunteria umbellata on Paroxetine-induced erectile dysfunction in male Wistar rats.

Materials & Methods: Fresh roots of T. superba, T. avicennioides, and seeds of H. umbellata were collected, pulverized, extracted with 70% ethanol, dried in an oven at 40°C, and subjected to phytochemical screening. The plants were mixed in a ratio of 1:1:1; T. superba and T. avicennioides (TASM) mixed; T. superba, T. avicennioides, and H. umbellata (TASHM) mixed. The male Wistar rats were acclimatized for one week and placed into four groups. Paroxetine Hydrochloride was administered to induce erectile dysfunction in the rats at a dose of 10 mg/kg, while sildenafil was used as a standard control at a dose of 10 mg/kg. The rats received 1 ml of TASM and TASHM. Nitric Oxide (NO), Luteinizing Hormone (LH), Follicle Stimulating Hormone (FSH), and Testosterone Hormone (TH) were measured, while histological examinations of testes were evaluated.

Results: Saponins, reducing sugars, steroids, phenolic compounds, Cardiac glycosides, tannins, and flavonoids were common in all plant extracts. NO showed a significant increase (p<0.05) at 75 mg/kg body weight in TASM, while LH, FSH, and TH presented a significant (p<0.05) increase at 100 mg/kg in TASM. There was an increased level of spermatogenesis and Leydig cell proliferation evident in histology studies.

Conclusion: Combination of TASHM at 75 mg/kg produced moderate efficacy. Future research is imperative as these plants offer a ray of hope in the management of erectile dysfunction.