ISSN 2689-8268| Volume 9

American Journal of Surgery and Clinical Case Reports

Short Review Open Access

Vitamin D Status in Women with Stress Urinary Incontinence

Maria de las Mercedes Becerril Heras[1*] and Maria Alicia Camina Martin[2]

Women's Care Unit Primary Care Health Management Valladolid East,University Specialist in Pediatric Nursing, Expert in Health Services Administration, Spain

Pharmacology, Neurobiology and Molecular NutritionUniversity of Valladolid, Spain

***Corresponding author:**

María Jesús Becerril Heras,
Women's Care Unit Primary Care Health Management Valladolid East, University Specialist in Pediatric Nursing, Expert in Health Services Administration, Spain

Received: 02 Aug 2025
Accepted: 10 Aug 2025
Published: 12 Aug 2025
J Short Name: AJSCCR

Keywords:

Nurses; Midwives; Menopause; Muscle Strength Dynamometer; Pelvic Floor Disorders; Urinary Incontinence Stress; Vitamin D; Women

Citation:

María Jesús Becerril Heras. Vitamin D Status in Women with Stress Urinary Incontinence. Ame J Surg Clin Case Rep. 2025; 9(1): 1-2

1. Abstract

1.1. Aim

To describe the relationship between vitamin D status, severity of female Stress Urinary Incontinence and handgrip strength.

1.2. Background

The relationship between vitamin D nutritional status and symptoms of pelvic muscle dysfunction is starting to be considered.

1.3. Design

Descriptive cross-sectional study carried out on a sample of women with Stress Urinary Incontinence.

1.4. Methodology

A study was conducted in a sample of female volunteers in which serum vitamin D levels were determined, muscle strength was measured by hand dynamometry, incontinence severity was assessed using the Sandvik and Cough tests and perineal strength was assessed using the Oxford test. 2-to-2 comparisons were assessed using the T- Student or U-Mann- Withney test and multiple comparisons were assessed by ANOVA. Significance level: $p<0.05$.

1.6. Results

Women with severe vitamin D deficiency showed significantly lower grip strength values than those with mild deficiency and normovitaminosis. Using the Sandvik test, significantly lower grip strength values were observed in women with mild stress incontinence compared to those with severe incontinence.

1.7. Conclusion

A slight upward trend is observed in muscle strength values as the degree of contractility of the striated pelvic floor muscles increases as well as a downward trend in muscle strength values as the severity of stress incontinence increases.

2. Summary Statement

2.1. What Is Already Known About This Matter?

•Women are more likely to suffer from SUI throughout their lives. Risk factors such as pregnancy, childbirth, menopause and their normal anatomy and hormonal function make them particularly vulnerable to this pathology.

•In vitro studies have shown that low levels of vitamin D are another added factor in the predisposition and worsening of this pathology.

What this paper adds?

•It shows the levels of vitamin D in the blood to determine if they correlate with urine leakage or with a worsening of it.

•It is classified according to the severity of urinary symptoms in order to establish a relationship with serological levels of vitamin D.

•In addition, muscle strength and mass are assessed to determine the degree of specific contraction in the perineal area and compare it with the blood levels of vitamin D.

2.2. The Implications of This Paper

•Personal and gynecological factors have been grouped in women that, in previous literature, had been studied separately to have a more global vision of women.

•Vitamin D levels, menopause and muscle fragility have been analyzed simultaneously, enabling joint preventive actions to improve the symptoms of female urinary incontinence.

•An assessment of muscle strength and mass has been included to enable subsequent action focused on the pelvic floor muscles.

3. Funding Information

This research was financially supported by Regional Health Management of Castilla y León (Spain) (2428/B/21)