

Chapter 19

Diabetic Shingles

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Abstract

Shingles (Herpes zoster) increases with age and is higher in women with diabetes mellitus than in men; moreover, diabetes mellitus appears to elevate the risk of herpes zoster more significantly in elderly patients compared to younger individuals.” Herpes zoster (shingles) represents a significant clinical concern in patients with type 2 diabetes mellitus (T2DM), who experience a higher disease burden compared to non-diabetic individuals. Infection in this population is associated with increased healthcare utilization, including more frequent outpatient visits, greater use of antiviral therapy, and a higher risk of hospitalization, along with prolonged periods of sick leave. Furthermore, patients with T2DM report a greater decline in quality of life following herpes zoster infection, with a slower recovery trajectory than non-diabetic individuals. Importantly, herpes zoster has also been linked to worsening glycemic control, further complicating diabetes management and outcomes.

Keywords: Herpes zoster, Shingles, Type 2 diabetes mellitus (T2DM), Aging, Gender differences, Risk factors.

Introduction

Shingles and diabetes are two different medical disorders, shingles is more common in those with diabetes, particularly those over 50 years of age. Diabetes is a long-term illness that impairs the body’s ability to control blood sugar levels. In addition to weakening the immune system over time, diabetes can cause major health issues like kidney failure, nerve damage, eyesight loss, and an elevated risk of heart disease and stroke. People over the age of 50 with diabetes have about a 26% higher chance of developing shingles compare to those without diabetes.

Shingles, also known as herpes zoster, is a painful viral infection. It causes a localized, blistering rash that typically appears on one side of the body and can sometimes affect the face and the area around an eye. The infection is caused by the reactivation of the varicella-zoster virus (VZV), the same virus responsible for chickenpox. After a person recovers from chickenpox, the virus remains dormant in the nerve tissue and may reactivate later in life, causing shingles. Diabetic patient had about a 40% higher risk of being readmitted to the hospital after a shingles infection. shingles is not life-threatening, but is extremely painful.

Definitions

Diabetes Mellitus

Diabetes Mellitus is a condition where blood sugar levels are too high due to problems with insulin.

Shingles

Shingles is a painful skin rash caused by reactivation of the Varicella Zoster Virus—the same virus that causes chickenpox. Specially on chest, abdomen, and back, but nerves of head and face can sometimes be affected.



Relation Between Diabetes and Shingles

- People with diabetes have a weaker immune system, especially if blood sugar is poorly controlled.
- This makes them more likely to develop shingles.
- Shingles in diabetic patients can be:
 - More severe
 - Longer-lasting
 - More likely to cause complications like nerve pain (postherpetic neuralgia)

Incidence

The incidence rate of shingles In diabetics: about 7–8 cases per 1000 people per year and In non-diabetics: about 4–5 cases per 1000 per year .This means Diabetes increases risk by about 1.6 to 1.8 times (60–80% higher).

Causes

1. Reactivation of Varicella Zoster Virus (stays in body after chickenpox) Diabetes increases the risk of shingles mainly because it weakens the immune system. Other diabetes-related complications can further reduce immunity, making it harder for the body to control infections. When the immune system is weak, it cannot keep the chickenpox virus dormant, allowing it to reactivate and cause shingles.
2. Triggered when immunity becomes weak.

Common triggers

- Aging (50+)
- Diabetes Mellitus
- Stress or illness
- Weak immune system (infection, medications)

Symptoms

- Burning or tingling pain (often on one side of the body)
- Development of a rash by several days or even weeks
- Red rash → small fluid-filled blisters that eventually turn into scabs
- Fever, fatigue
- Pain can continue even after rash heals
- Itching

- Headache, and body ache
- Upset stomach & chills

Age-wise risk of Shingles in Diabetes Mellitus

Risk increases with age and diabetes together-Approx. incidence (per 1000 people/year in diabetics):

- 18–64 years: ~ 7 cases / 1000
- ≥ 65 years: ~ 12 cases / 1000 (highest risk)
- Young diabetics → moderate risk
- Middle age (50+) → high risk
- Elderly (65+) → very high risk

Diagnostic evaluation

1. History taking & Physical Examination
2. Blood glucose levels and hba1c
3. Direct fluorescent antibody testing
4. Viral culture

Treatment

- Antiviral medicines (like Acyclovir) work best if started early
- Pain relief medications
- Good diabetes management during infection
- Bandages – to keep the rash clean and minimize the risk of spread
- Home remedies – cool compress and calamine lotion can reduce discomfort

Shingles Vaccine

- Protects against Shingles (painful rash from Varicella Zoster Virus)
- **Who should take it:**
 - Age 50+
 - People with Diabetes Mellitus or weak immunity
- **Doses:** Usually 2 doses (2–6 months apart)
- **Benefits:**
 - Reduces risk of shingles
 - Prevents long-term nerve pain
- **Common side effects:**
 - Mild pain, redness, or fever
- Safe and strongly recommended, especially if you have diabetes.

Prevention

1. Shingles Vaccination
 - People over 50
 - People with diabetes
2. Keeping blood sugar under control
3. Regularly wash hand
4. Avoid contact with people who have chickenpox or shingles
5. Strengthen immune system by eating a healthy diet, exercising, getting enough sleep and keeping glucose in range.

Complication

1. Worsening of glucaemic control for someone with diabetes, a shingles infection puts extra strain on the heart and blood vessels raising the irrisk of a stroke or heart attack by 25% in the following infection.
2. Higher risk of postherpetic neuralgia this nerve pain can persist long after the rash has healed and may continue for many years.
3. More severe and longer duration illness high blood sugar level can weaken the immune system making it harder for the body to fight off infections including shingles.
4. Slower wound healing
5. Long term nerve pain
6. Increased risk of stroke and heart attack
7. Secondary bacterial infections

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