

# Skin Flickering Sign: A New Clinical Sign for Differentiating Pre-Eruptive Herpes Zoster from Other Causes of Unilateral Pain

Haidar Hassan Al-Ameri<sup>1\*</sup>, Hieder Al-Shami<sup>2</sup>

<sup>1</sup>Department of Neurosurgery, Kut University College, Kut, Wasit, Iraq  
<sup>2</sup>Department of Neurosurgery, Al-Hussein University Hospital, Cairo, Egypt

## ABSTRACT

Diagnosing herpes zoster before the appearance of eruption is very challenging. We report a new clinical sign that can aid in the diagnosis of herpes zoster in the pre eruptive phase and in exclusion of other types of pain. The skin flickering sign (or Haidar sign) is regarded positive when patient feels an increase in the intensity of pain or paresthesia during flickering of skin. Skin flickering sign is a simple, reproducible and diagnostic sign for differentiating between herpes zoster pain or allodynia and any other cause of unilateral pain including pain of visceral origin. This sign will aid physicians in the diagnosis of pre-eruptive herpes zoster or at least in raising the suspicion of its presence thus proceeding to the expensive not widely available laboratory tests.

**Key words:** Paresthesia, Allodynia, Herpes zoster, Laboratory tests, Suspicion

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**Corresponding author:** Dr. Haidar Hassan Al-Ameri  
**E-mail:** Haidar.Hassan@alkutcollege.edu.iq  
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## INTRODUCTION

Herpes zoster is usually manifested as a unilateral vesicular eruption, onset of disease is heralded by a pain within the dermatome which may precede the lesion by 48-72 hours [1-4] within the first days when there is no skin eruption, there is a few physical signs, this makes diagnosing herpes zoster very difficult [5,6], actually it is the cutaneous eruption what makes herpes zoster diagnosis obvious [7,8]. The most commonly affected dermatomes are T3-L3 dermatomes so pain of herpes zoster can mimic even acute abdomen and may leads even to unnecessary surgical exploration. This was illustrated in a study of 121 negative emergency laparotomies, in which three patients had a diagnosis of herpes zoster [9].

Our case report recorded a new clinical sign to differentiate pre-eruptive herpes zoster pain from other types of pain including pain of visceral origin.

## Description of maneuver

The steps for applying skin flickering sign (haidar sign) are simple and require no instruments. First, in patients presented with unilateral pain specially elderlies or immunosuppressed patients in which we had to exclude

herpes zoster, we can apply a flickering movement to the affected area with the tip or side of our right thumb if pain or parasthesia increase in intensity, this donate a positive sign (Figure 1), to further more ensure positivity we can gently take a skin fold from the affected area with thumb and forefingers of our left hand ensuring that it involves more than single dermatome. If the cause of the pain is pre eruptive herpes zoster, this flickering movement will increase the intensity of pain or paresthesia in the stimulated area (with or without facial grimace or withdrawal reflex) and the signs is regarded as a positive, while in visceral pain or other causes of unilateral pain the flickering movement will not change the intensity of pain. The explanation is simple; this pain is of cutaneous origin in herpes zoster due to hyperalgesia effect of the affected dermatome while it is not in cases of visceral or peritoneal origin of the pain.



**Figure 1: Apply a flickering movement to the affected area with the tip or side of our right thumb.**

### CASE PRESENTATION

We collected five cases in which this sign was a clear cut to differentiate between visceral and pre eruptive HZ pain. All cases were consulted for diagnosis mismatch between complain and sonographic findings of either clear healthy gallbladder or surgically removed gallbladder. All cases pose a risk factor for either

cholecystitis or herpes zoster infection. However, the dermatomal representation of pain is the primary factor confounding the diagnoses. All these cases underwent a skin flickering method and found to be positive. A diagnosis of neuralgia was aided by this method. Therapeutic trial thereafter revealed an improvement of pain over 3 months with subsequent need for interventional pain management for the 4<sup>th</sup> and 5<sup>th</sup> cases [Table 1].

**Table 1: Criteria of cases reported.**

No	gender	Age	PMH	D.D	Affected dermatome
1	F	59	MD, HTN, GERD, chronic cholecystitis	Biliary colic, IBD (RHC)	Right T7
2	F	72	HTN, DM, CVA	Abdominal pain (RHC)	Right T6
3	M	55	Obesity, hypercholesterolemia	RHC	Right T7-8
4	F	45	Obesity	RHC	Right T8
5	M	66	DM, HTN, Previous cholecystectomy	RHC	Right T7

### DISCUSSION

In our case report, we confirmed a diagnosis of a pre-eruptive herpes zoster misdiagnosed as a visceral pain focusing by a new method of examination. We focused on differentiating herpes zoster from other causes of right hypochondrial pain because of the high frequency of these dermatomes involvement in herpes zoster and high frequency of other causes of right hypochondrial pain. This method is quietly simple, reproducible and diagnostic.

Our method is completely based on the pathophysiology of herpes zoster; it emerges in the peripheral and central neurons [10]. Damage of these neurons by inflammatory by product resulting in a lower threshold of pain action potential, spontaneous discharge, and disproportionate responses to stimuli [11]. All of these previously mentioned are described as allodynia [12,13]. Patient with HZ has five types of sensations:

- Constant pain without a stimulus
- Intermittent pain
- Pain brought on by a stimulus (hyperalgesia)
- Dysesthesia.
- Paresthesia

Misdiagnosis of neurological diseases is an everyday story in clinical practice it has many ethical, clinical and economic drawbacks [14,15]. Fan and colleagues reported a case with herpes zoster misdiagnosed as acute appendicitis [16]. Monib and Emre reported a case with acute abdomen which lately diagnosed with herpes zoster presented with acute left upper abdominal quadrant pain [17].

This is due to variety of causes. First, lower attention of clinical knowledge in the era of now technology in diagnostic imaging [18]. Second, over crowdedness of outpatient clinics shortened time of consultation. Third,

insidious nature of disease with and its ability to overlap with other diseases [16,19,20]. Physicians should be aware of his/her patient's complain. Trying to update his/her knowledge to provide the best service ever.

Our clinical sign offers the opportunity to physicians, neurologists, dermatologists, neurosurgeons and pain management clinicians to differentiate between visceral pain and dermatomal pain due to post herpetic neuralgia. This will be of great value in decreasing frequency of misdiagnosis of HZ. The authors are planning to conduct a wide sample randomized study in the future.

### CONCLUSION

Skin flickering sign (or Haidar Sign) is a simple, reproducible and diagnostic sign for differentiating between visceral pain and postherpetic pain. This sign will aid physicians in the diagnosis of pre-eruptive herpes zoster or at least in raising the suspicion of its presence and thus choosing patients eligible for confirmatory immunological tests for herpes zoster in pre eruptive phase.

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The authors decided to name the skin flickering sign as (Hayder Sign) as another name for it.

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