



## LETTER TO THE EDITOR

## A New Document on Smallpox Vaccination



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## KEYWORDS

immunization;  
smallpox;  
vaccination

**Abstract** Modern medicine owes much to the invaluable heritage of the practices of past generations and their achievements that have now become medical rules. In the case of vaccination, there is evidence that the nomads of Baluchistan (Southeast Iran) demonstrated natural immunization against cowpox, a practice that was later introduced to the medical community by Edward Jenner. Although the discoveries of scientists cannot be ignored, they are certainly based on the traditional and indigenous experiences that have been transferred from generation to generation until reaching us.

## 1. Introduction

Vaccination against contagious diseases is an important aspect of the science of immunology. Over time, people have traditionally used experimental approaches for the prevention of such diseases, which have formed the basis for later scientific discoveries. The increasing use of vaccines has in some cases led to the negligence of the invaluable heritage of past experiences. Terrible nightmares of the past which caused resentment and fear for previous generations have now become a thing of the past as a result of their efforts. The eradication of many diseases, which without doubt has been the result of day and night efforts of scholars, has its roots in the skills of people who experimentally learned to prevent many diseases [1,2].

Smallpox is a contagious disease that, along with diseases such as plague, typhus, cholera, and so on, has led many people to death throughout history. It caused

blindness or disfigurement in many people. The disease is common in animals and humans, and caused panic in people, and its eradication in the late 20<sup>th</sup> century is considered to be one of the greatest achievements in medicine against fatal diseases [1,2].

As we know, the root of the word vaccine is the Latin word of “*vaccinus*” which means “from cow”. It is believed that the word vaccine was first used in 1798 by Edward Jenner (the British physician, 1749–1823) and the word was created to define a preventive method used against smallpox, in which the wound fluid obtained from infected cattle was inseminated to healthy individuals (Fig. 1).

Studying the word “vaccine” in the book of “Terminologie Médico-Pharmaceutique et Anthropologique” written by J. L. Schlimmer [3] reveals new issues on this topic. Dr Johann Louis Schlimmer (1818–1880) was a Dutch physician who completed his studies in Rotterdam and Leiden and took a diploma in medicine in 1839. He came

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**Figure 1** Cow milking by a rural woman (from <http://kohnush.blogfa.com/1392/01> with permission).

to Iran in 1851 and after residing and spending days in practice in Rasht, he did his research on leprosy by studying and treating affected individuals in the areas of Tallish. He then moved to Tehran and taught in the polytechnic of Dar-ul-Funun for about 10 years (1273–1283 AH), followed by free-practice. He died in 1880, at the age of 62 years, and was buried in the Protestant cemetery in Akbarabad (West of Tehran). He wrote approximately 10 books on science, medicine, pharmacy, and chemistry, but his most famous book is “Terminologie Médico-Pharmaceutique et Anthropologique”, which was first published in Tehran in 1874 and then republished in 1970 by the Tehran University Press [4].

The following is Schlimmer’s description of a vaccine in his own words:

“French: Vaccine  
English: Cowpox  
German: Kuhpocken  
Arabic: جدري البقر  
Persian: آبله گاوي”

Nomads of Baluchistan not only know cowpox, but are also aware of its preventive role against smallpox. They enforce the duty of milking cows upon children who have ulcerous hands, and believe that this action immunizes them against smallpox infection. This kind of natural insemination of vaccine is known as cattle Putu. I have told them that vaccination through intentional ulceration of the skin is better than vaccination through an already present wound, but deans, who are considered as the local physicians, believe that ulcers on hands, whether caused accidentally or intentionally, are completely suitable for vaccination.

A British traveler has also mentioned the cowpox-shaped rash that was common in the tribes of Baluchistan.

“The heads of the various tribes of Baluchistan assured me on the efficacy of this vaccination method. Although the

disease is very rare, smallpox sometimes becomes epidemic. I did not have the opportunity to observe the smallpox-like rash caused by contact with camels, which is named camel Putu.” [3].

According to the chapter in the above-mentioned book, which was written about 140 years ago by a Western scientist and Iranian resident, it is clear that the history of vaccination dates back centuries and most probably before Jenner. As far as history remembers, Iranians were the first people to invent the vaccine and advance the field.

While the efforts of scientists in discovering scientific issues cannot be ignored, it must be noted that the medical advances have certainly not happened overnight and are rooted in the experiences of past generations, who offered their assets without expectation and hope of fame. It seems that by exploring the indigenous experiences and medical history texts, worthwhile materials and hypothesis-generating ideas can be presented to the medical community.

## Disclosure statement

The authors declare that they have no conflicts of interest and no financial interests related to the material of this manuscript.

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