Smallpox Vaccination Discontinuation and Expansion Into an Endemic Area of Monkeypox: A Reanalysis of Available Data

Dear Editor,

Monkeypox is a rare type of pox that has returned due to zoonosis. Human-to-human transfer is currently being investigated.[1] As the number of recorded cases in various countries rises, the medical community is concerned, and cautious planning to coincide with a potential monkeypox outbreak is required.[2] The connection between the demand for smallpox vaccination, insufficient population immunity, and the spread of the monkeypox endemic area is an intriguing topic.[3,4] The authors investigate the situation in West Africa in this research.

This is a descriptive analysis done in the past. The available data on areas with reported monkeypox in an African endemic area were reassessed. The data are available in a prior publication that reported the state of disease epidemiology during a 13-year period (from the 21st to the 33rd year following smallpox vaccine termination).[5] A conventional descriptive statistical analysis was used to examine the incidence distribution across the study period. The standard deviation, variance, skewness, and kurtosis values were computed. According to source data [Table 1], there is a tendency of growing locations reporting monkeypox occurrence. The incidence of monkeypox ranges from 12.3 to 26.5%, with a mean of 20.2%. According to the descriptive statistical analysis, the standard deviation, skewness, and kurtosis were 4.2, −0.2, and 2.1, respectively. There is no outlier in the data, and the distribution is normal, but there is a kurtotic peak or outbreak pattern.

Table 1: Reported incidence of monkeypox in an endemic area in Africa and period after discontinuation of smallpox vaccination

Period after smallpox vaccine discontinuation (year)	Incidence (/100,000 local population)
21	12.3
22	17.1
23	14.9
24	20.6
25	18.3
26	16.4
27	19.4
28	23.7
29	21.5
30	21.2
31	24.3
32	26.2
33	26.5

Authors'contributions

PS has substantial contributions to the conception or design of the work, the acquisition, analysis, interpretation of data for the work, drafting the work, revising it critically for important intellectual content, final approval of the version to be published, and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

VW has substantial contributions to the conception or design of the work, the acquisition, analysis, or interpretation of data for the work, drafting the work, revising it critically for important intellectual content, final approval of the version to be published, and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Conflicts of interest

There are no conflicts of interest.

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