

# Experience with Younger Patients in a Post-Polio Clinic: A Case Series



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## Introduction

The most serious acute paralytic poliomyelitis (APP) epidemics occurred in the United States during the 1940's and 1950's, with 1952 being the worst outbreak in US history. Despite success in eradicating poliovirus in the United States, there continues to be polio endemic countries. According to the World Health Organization, the major polio endemic countries are Nigeria, India, Pakistan and Afghanistan.

Survivors of paralytic poliomyelitis suffer renewed neurological and neuromuscular symptoms decades after maximum recovery from the acute disease. These symptoms are commonly referred to as late affects of polio or post-polio syndrome. The hallmark of post-polio syndrome is new weakness, fatigue and pain.

As the polio population ages, the mean age of patients seen in our clinic has increased. At the same time, we are also seeing a younger cohort of survivors who have immigrated to the US.

There are two cohorts seen in our clinic: an older group who typically contracted APP during the mid-20th century epidemics in this country and a younger group who had polio as infants in developing countries and then immigrated here as adults.

We performed a retrospective chart review of patients under 50 years of age who were evaluated in our post-polio clinic. We report patient characteristics, new health and functional problems as well as social and vocational status.

## Case Description

Between 2009 and 2010, we evaluated 19 patients, with a mean age of 39.9 (range: 27-47) representing 7.6% of all patients seen in our clinic. These patients contracted APP at a median age of 15 months between the years 1960 and 1978 in their home countries. Ninety five percent of the patients immigrated to the United States in early adulthood (Table 1).

Majority of patients presented with complaints of new weakness, pain, fatigue as well as functional decline with walking (Table 2). Three patients reported difficulty with self care activities. Six were newly diagnosed with PPS.

One patient is pregnant, 16 are married and 12 have 1 or more children (Table 3). Majority of patients worked outside the home and seven patients reported physical challenges at work.

## Results

**Table 1: Subject Characteristics**

# subjects	Average age	Gender (M:F)	Median age at onset	Involved limbs	Country of origin
19	39.9 years (27 to 47)	12:7	15 months (3 months to 14 years)	LE: 13 UE/LE: 6	A:9 B: 4 C: 3 D:2 E:1

Key: A=India, B=Asia, C=Africa, D=Columbia/Syria, E=USA

**Table 2: Number and percent of patients with New Health and Functional Problems**

	N	%
<b>New Health Problems</b>		
Weakness	13	73.7
Pain	12	63.2
Fatigue	14	73.7
<b>New Functional Problems</b>		
Walking	11	57.9
Stairs	6	31.6
Prolonged Standing	5	26.3
Self Care	3	15.9

**Table 3: Social and Vocational Status**

	N	%
<b>Married</b>	16	84.2
<b>Single</b>	2	10.5
<b>Divorced</b>	1	5.2
<b>Subjects with Children</b>	12	63.2
<b>Number of children</b>		
1-2	9	52.6
3-4	2	10.5
5	1	5.2
<b>Work outside home</b>	13	73.7
<b>Students</b>	3	15.9
<b>Homemaker</b>	1	5.2
<b>unemployed</b>	1	5.2

## Discussion

Despite the global effort to eradicate polio, there are many who became infected years after polio was eliminated in this country. The World Health Organization estimates there are between 10 and 20 million polio survivors worldwide. Meanwhile, there has been a steady decline in the number of survivors from the mid-century epidemics in the United States.

In contrast to the typical older patient, the younger polio survivors present a different and challenging mix of issues such as schooling, demands of work, and raising a family.

## Conclusions

While polio patients are getting older, there is a younger cohort of immigrants, especially in metropolitan areas, who will continue to need post-polio care from physiatrists well into the future. Late affects of polio or PPS can no longer be regarded as a dying disease that only afflicts the elderly.

## References

- <http://www.who.int/topics/ poliomyelitis/en/>, Accessed on 10/1/2010.
- Halstead L.S. Assessment and Differential Diagnosis For Post-Polio Syndrome. *Orthopedics*. 1991;14:1209-1217.