

Cat Scratch Disease as a Mimicker of Malignancy: Rare and Elusive

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AGE (Years)	SEX	EXPOSURE	LYMPHADENOPATHY	IgG titer	IgM titer >1:20	Histopathology	PET SCAN	Malignancy mimicked	Treatment	Outcome
14	F	Cat, dog	Left submandibular, bilateral inguinal	>1:1024	No	NA	NA	Lymphoma	Azithromycin x 7 days	Resolved
21	M	Cat	Left epitrochlear	1:512	No	Non-necrotizing granulomatous lymphadenitis	NA	Sarcoma	Azithromycin x 7 days	Resolved
52	F	Cat (Kitten)	Left supraclavicular	>1:1024	Yes	Reactive lymphadenitis	NA	None	Unknown	Resolved
18	F	Cat (Kitten)	Right inguinal	1:512	No	Dermatopathic lymphadenitis with reactive lymphoid hyperplasia	Right inguinal and external iliac chain lymph nodes	Lymphoma	Azithromycin and rifampin x 10 days	Persistent lymphadenopathy and fever
55	F	Cat	Right submandibular, right preauricular	1:512	No	Abscesses	NA	Metastatic skin cancer	Azithromycin x 5 days	Improved
16	F	Cat	Left axillary	1:128	No	NA	NA	NA	Azithromycin	Improved
14	F	Dog	Left supraclavicular	>1:1024	Yes	NA	NA	Sarcoma vs lymphoma	Azithromycin x 5 days	No follow up
79	F	Cat	Left and right axilla	>1:1024	No	Non-necrotizing granulomatous lymphadenitis	Left axillary and left infraclavicular lymph node	Breast cancer	None	Improved
59	F	Cat	Left inguinal	1:512	No	Non-necrotizing granulomatous lymphadenitis	Left inguinal and external iliac nodes	None	None	Resolved
17	F	Cat	Left epitrochlear	1:256	Yes	Non-necrotizing granulomatous lymphadenitis	NA	Sarcoma	Azithromycin x 5 days	Improved
31	F	Cat (Kitten)	Left and right axillary	>1:1024	No	Focal necrosis with mild inflammation and histiocytes	NA	Breast cancer	Azithromycin x 5 days	Resolved

Table 1 : Patient characteristics, symptoms, serology, pathology, imaging findings, management

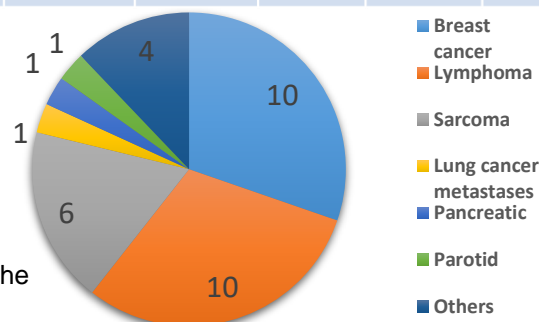


Figure 1: Malignancy mimicked by CSD in the literature.

BACKGROUND

- Cat scratch disease (CSD) caused by *Bartonella henselae* commonly presents with fever, lymphadenopathy and hepatosplenic involvement.¹
- Atypical presentation like Parinaud's syndrome, osteomyelitis and neuroretinitis have also been reported.¹
- CSD mimicking malignancy has been the subject of scattered case reports.²

METHODS

- Retrospective review of patients with CSD at MD Anderson Cancer Center (MDACC) between 11/2015 and 1/2020.
- CSD was diagnosed based on *Bartonella henselae* serology, animal exposure and biopsy findings consistent with the diagnosis.
- We used the presence of 2/3 criteria along with exclusion of other causes to confirm diagnosis of CSD.
- Data on epidemiology, signs, symptoms, laboratory findings, histopathology, radiological studies, treatment used, outcome and the malignancy CSD mimicked.
- Published cases of CSD mimicking malignancy identified using Medline, Embase, Scopus and Google Scholar from 1952 till 1/2019.

RESULTS

- We identified 11 patients at MDACC with CSD.
- 5 (45%) were ≤ 18 years old, none had a prior history of cancer.
- 2/11 (18%) had fever, none had skin lesions or hepatosplenomegaly.
- PET scan done for 3 patients revealed only enlarged lymph nodes.
- Bartonella* IgG titer was ≥ 1:512 in 9/11(82%).
- Non-necrotizing granuloma was the most common finding in 4/8 patients. (Table 1)
- We also identified 33 cases in the literature mimicking malignancy. (Figure 1)

CONCLUSION

- Although there was a probable referral bias in the CSD patients at MDACC, CSD should be included in the differential diagnosis of malignant causes of lymphadenopathy.

REFERENCES

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