The child was empirically treated with ceftriaxone and metranidazole initially for three days with no improvement. It was changed to amoxyclav and ciprofloxacin based on the culture and sensitivity report for 3 weeks. She responded well which was evidenced by a reduction in the size of the abscess in the MRI scan following treatment (Figure 2). The child did not have any further neurological deficits and she was discharged uneventfully.

Discussion

We are reporting a rare case of basal gangliar abscess caused by Group-G Streptococcus (*Streptococcus dysgalactiae* subspecies *equisimilis*). Basal gangliar abscesses are rare compared to other locations of the brain [4]. This case report becomes rare, as this is the first case where the etiology for basal gangliar abscess is Group G streptococcus. There are few case reports in which *Streptococcus milleri*, pseudomonas [4], Peptostreptococcus, streptococcus Group F have been isolated from basal gangliar and thalamic abscess [5]. The most common site of brain abscess is the temporal lobe abscess with CSOM as the predisposing factor [6]. The most popular organisms associated with brain abscess are *Streptococcus viridans*, *Streptococcus milleri*, *Staphylococcus aureus*, *Mycobacterium tuberculosis* and some of the gram-negative bacilli like *Pseudomonas*, *Proteus*, and *Candida* [2].

Group G streptococcus as an etiology in brain abscess is rare. It is a commensal of the throat and vagina in healthy humans [6]. It is known to cause pharyngitis, impetigo, glomerulonephritis, wound infection and cellulitis [6]. It is not a common cause of bacteremia and invasive disease. It has been increasingly implicated to cause opportunistic infections in individuals with underlying medical conditions and has gained importance in recent years [7].

In this case, the child had congenital heart disease (CHD) which is one of the most important predisposing factors. CHD, especially arteriovenous malformations, serves as a focal point for bacteria to settle and become a source of bacteremia [7]. Congenital malformations like patent ductus arteriosus, ventricular septal defect and tetralogy of Fallots allows blood-borne bacteria to bypass the pulmonary capillary bed and reach the brain [8]. The decreased arterial oxygenation and polycythemia in CHD may cause focal areas of ischemia in the brain providing a nidus for bacteria to multiply and form an abscess which could be the probable cause in this case [9].

Figure 1. MRI scan shows a ring enhancing lesion in the thalamic area of the right side of the brain

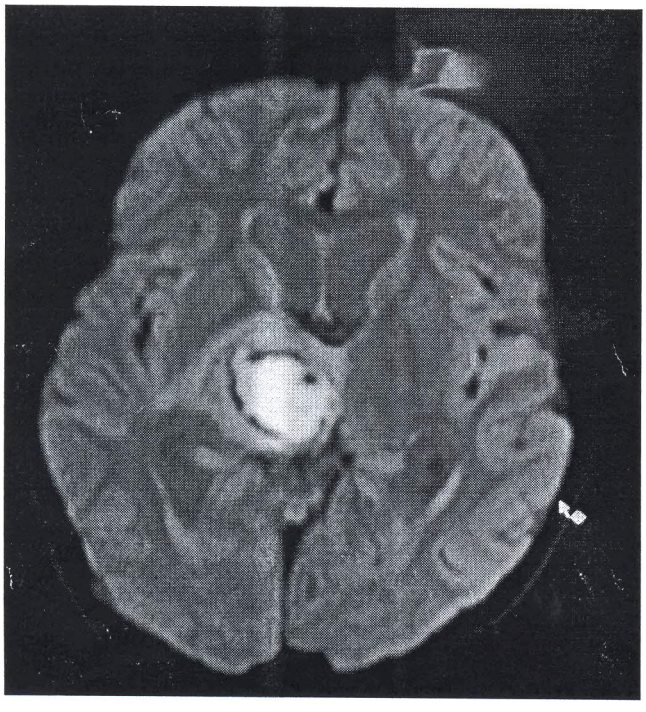
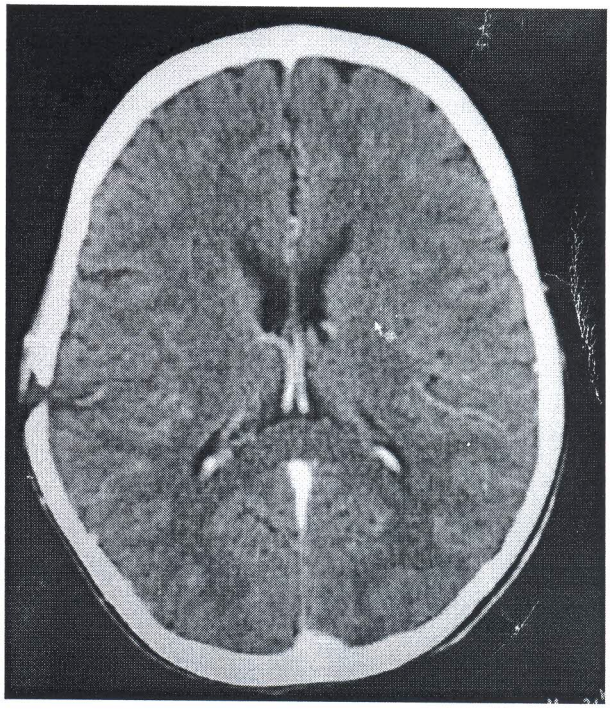


Figure 2. MRI scan shows the reduction of size of the abscess following treatment for three weeks.



Conclusion

Brain abscess has a high mortality and sequelae. It has been cured by antibiotics alone without surgical drainage [10]. For appropriate management of brain abscess, it is important to identify the organism. Microscopy becomes an important tool for diagnosis in emergency. Simple techniques like gram stain and Ziehl-Neelsen stain would help in the proper selection of antibiotics, as it is difficult to distinguish a tubercular abscess clinically and radiologically from a pyogenic abscess [1].

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From

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Respected Sir,

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With reference to the above subject I would request you to document my article titled (case report): "Group G streptococci in association with brain abscess: a rare occurence authored by Parimala S, Vidhya R, Bipin BL, Beena P.M, Hariprakash Chakravarthy is published in the "Journal of infectious disease in developing countries" J Infect Dev Ctries 2014; 8(11): 1488-1490. Kindly do the needful Sir.

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