



ETIOLOGY OF EXCESSIVE CRYING IN INFANTS AGED BETWEEN 1 MONTH TO 12 MONTHS IN PERIPHERAL INSTITUTE OF HIMACHAL PRADESH, INDIA

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Abstract

Inconsolable crying conveys the evidence about an infant's state as well as mental health which, when carefully seen can provide diagnostic information for parents and clinicians. When crying is inconsolable and imprudent, it can stress parents, disrupt parenting and in rare cases, make infant at risk for abuse. Around 25% of all infants cry excessively during their first months of life. This phenomenon has been termed "infant colic." In most cases, clinicians are unable to determine the cause of the colic. In this study we are finding causes for the excessive cry in infants aged between 1 month to 12 months. The causes for the excessive crying like infantile colic, nasal blockade, diaper rash, hunger, acute otitis media, and post vaccination febrile illness, cow milk protein allergy, flatulence, fever, sepsis, and meningitis, foreign body in eye, hair tourniquet syndrome and excessive maternal concern were studied.

Key words: excessive cry, infantile colic, acute otitis media

Introduction

Inconsolable infant behaviour and colic are usually used to express a range of behaviours in infants aged up to 1 year that include prolonged episodes of crying, difficulties with sleeping and also feeding¹. Studies suggest that it is 20% prevalent and incidence rate is equal between both genders²⁻³. The problems are seen more commonly in first born baby and baby with siblings who also had this condition⁴⁻⁶. A one fourth fraction of all infants spend a utmost part crying excessively without responding to parental soothing attempts at most times in infancy. This phenomenon has been termed "infant colic" and is often a source of great worry for parents, even though it mostly resolves by 3 or 4 month of age. Many parents seek professional help for their colicky infant and this produces exhaustion and considerable strain to the parents. Infantile colic is a behavioural syndrome characterized by excessive paroxysmal crying, which most likely to occur in the evenings without any identifiable cause. Most widely used definition is based on the amount of crying by Wessel et al. According to which it is paroxysms of excessive crying in an otherwise healthy baby lasting more than 3 hours per day, occurring >3 days in any week for 3 weeks, aged 2 weeks to 4 months⁷. Infant crying is regarded as a normal part of neural and behavioural development. At 6 weeks of age infantile colic attains its peak. The mean duration of colic is 110 to 118 minutes per day, and declines to less than 1 hour per day by twelve weeks of age⁸⁻¹⁰. Crying occurs typically in late afternoon in the first weeks of life¹¹. Infants born preterm have their peak in crying at 6 weeks corrected age and thus appear to their parents with certain delay¹².

Etiology: There is much uncertainty about the cause of infantile colic. Organic cause should always be kept during the evaluation of excessive crying infant. Although Organic causes account for only < 5 % of infants presenting with excessive crying. These includes infantile migraine and subdural haematoma as neurological causes. Constipation, gastro oesophageal reflux, intussusception, cow's milk protein intolerance, rectal fissure, lactose intolerance strangulated inguinal hernia are among the gastrointestinal causes. Infections like, otitis media, urinary tract infection, meningitis and viral illness can also mimic colic. Trauma has to be excluded in a colicky baby namely child abuse, corneal abrasions, Foreign body in the eye and hair tourniquet syndrome¹³⁻¹⁴.

Method:

This prospective study was conducted at Civil Hospital Jwalamukhi District Kangra Himachal Pradesh in collaboration with department of ENT to find out different causes of excessive crying in infants aged 1month to 12months over a period of one year from May 2019 to May 2020. A pre structured questionnaire were made to help in diagnosis for the causes of excessive cry .Infants with history of excessive crying at least 3 times in a day for 3 days for a duration of at least 3hrs in 24hrs were included and admitted in the hospital for treatment and observation. Clinical diagnosis was made on the basis of detailed history and physical examination by paediatrician and ENT specialist .Relevant investigations were performed to confirm diagnosis.

Results

The study performed over a period of one year and 80 patients have been admitted with excessive crying after they met the inclusion criteria of the study. Our study found that average age at which infants presented with excessive cry was 5.1 ± 3.42 months and the causes for excessive crying in 1month to 12 month old infants was majorly contributed by infantile colic in 21.2% with average age 2.3 months, acute otitis media in 12.5% with average age 7.8 months, nasal blockade in 8.7% with average age 2.5 months, post vaccination fever in 6.25% with average age 5.4 months rest of the causes and average age at which they presented is listed in Table1.

Table1. Chart show causes, average age of presentation and percentage of excessive cry.

Clinical Diagnosis	No. of cases total (n=80)	Average age at presentation (in months)	Percentage %
Nasal Blockade	7	2.5	8.7
Infantile Colic	17	2.3	21.25
Cow Milk Protein Allergy	3	6	3.7
Viral Fever	3	3.3	3.7
Sepsis	2	5	2.5
Post Vaccination Fever	5	5.4	6.25
Meningitis	1	6	1.25
Hunger Cry	5	1.8	6.25
Acute Otitis Media	10	7.8	12.5
Diaper Rash	4	7.5	5
Urinary Tract Infection	3	10.3	3.75
Sub-Acute Intestinal Obstruction	2	10.5	2.5
Cerebral Palsy	5	11	6.2
Excessive Maternal Concern	5	1.8	6.2
Perianal Rash	3	7.3	3.75
Hair Tourniquet Syndrome	1	7	1.25
Conjunctivitis	2	2	2.5
Trauma	2	7	2.5

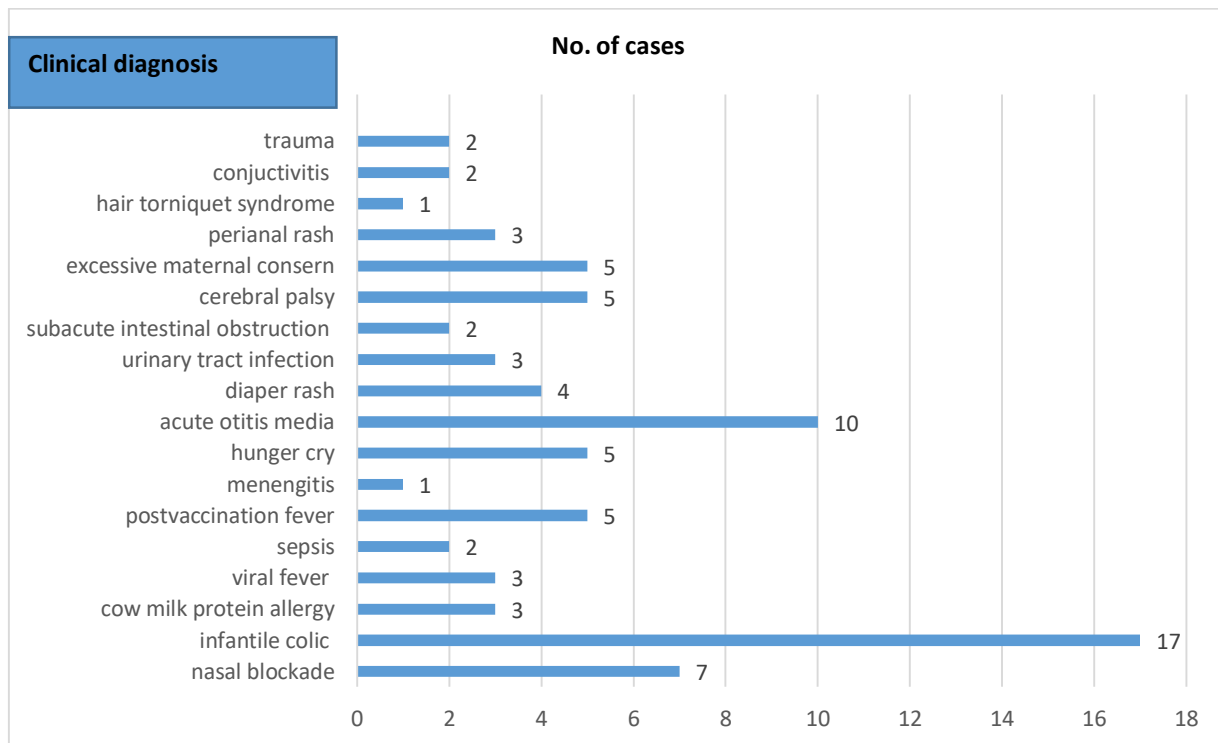


Fig.1 Show number and causes of excessive cry.

Discussion

Our data shows that the major cause for excessive cry was infantile colic followed by acute otitis media followed by nasal blockade which contributes to 42% of total cases average age of presentation with excessive cry was 5.1 months. The pathophysiology is poorly understood for infantile colic. Some experts consider that infantile colic is due to gastro-intestinal discomfort or intestinal cramping¹⁵. The average age of presentation of the infantile colic in our study was 2.3 months which is equal to 9.8 weeks. Studies have demonstrated increased duration of crying in the first weeks of life, reaching a maximum in between six to eight weeks of age and then declining around 12 weeks of age to achieve more stable levels¹⁶. Studies have proven that certain microbial signatures have also been associated with decreased amounts of crying. An inverse relation with microorganisms from the phyla Bacteroidetes, Actinobacteria and Firmicutes were seen with colic symptoms¹⁷⁻¹⁹. Acute otitis media was also prominent medical cause in our study in 12.5% cases so an ENT evaluation must be there when no identifiable cause of excessive cry is available. In some studies Urinary tract infections were the most prevalent medical condition, especially in very young

Infants²⁰. Excessive maternal concern has contributed to 6.2% cases in our study which can be explained on the basis of role of environmental factors, such as psychosocial issues, domestic violence, inadequate parent-infant interaction or parental anxiety²¹⁻²². A major consideration is, of course, whether the parental anxiety/depression is caused by the excessive crying of infant or vice versa. Also, it is wise logical that parental problems can influence the perception of their child's crying.

Conclusion: Excessive crying in infancy is a common condition that can be annoying to both parents and physicians. From the above study it is concluded that most common cause of excessive cry in infants is infantile colic followed by acute otitis media which should also be ruled out whenever the cause looks uncertain, therefore an ENT opinion should always to be considered to prevent its complications.

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